U.S. Army Corps of Engineers

Kansas City District



Demolition Design Report Operable Unit 2 - Building Demolition 95% Completion Phase

Cornell-Dubilier Electronics Superfund Site South Plainfield, NJ

USACE Contract No. W912DQ-06-D-0006 Task Order No. 0001

September 2006

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Introduction

SECTION

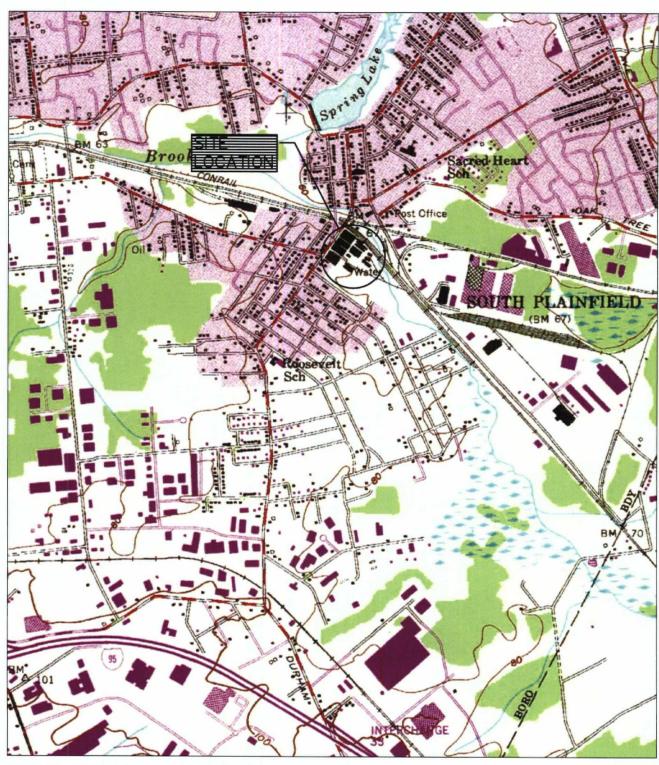
1.1 Project Background

The Cornell-Dubilier Electronics Superfund Site (the Site) is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey (Figure 1).

The Site consists of approximately 26 acres including the Hamilton Industrial Park, contaminated portions of the Bound Brook adjacent to and downstream of the industrial park, and contaminated residential, municipal, and commercial properties in the vicinity of the former Cornell-Dubilier Electronics Corporation, Inc. (Cornell-Dubilier Electronics) facility. The Site contains 18 subdivided buildings, numbered 1 through 18, some of which are currently used by several commercial and light industrial operations. Plan and elevation views of the Site buildings and storage tanks are shown on the Contract Drawings.

The developed portion of the facility (the northwestern portion) comprises approximately 45 percent of the total land area and contains buildings, a system of catch basins to channel stormwater flow, and paved roadways. Several of the catch basins drain into a stormwater collection system whose outfalls discharge at various locations along Bound Brook. The other 55 percent of the property is undeveloped and is predominantly vegetated. The central part of the undeveloped portion is primarily an open field, with some wooded areas to the northeast and south, and a deteriorated, partially paved area in the middle. The northeast and southeast boundaries consist primarily of wetland areas (Foster Wheeler, 2002).

The Site remediation was separated into multiple Operable Units. Operable Unit-1 (OU-1) consists of the residential, commercial, and municipal properties in the vicinity of the former



SOURCE: U.S.G.S. TOPOGRAPHIC MAP, 7.5 MINUTE SERIES, PLAINFIELD, NEW JERSEY QUADRANGLE, 1955, PHOTOREVISED 1981



U.S. ARMY CORPS OF ENGINEERS CORNELL-DUBILIER SUPERFUND SITE OU-2 BUILDING DEMOLITION SOUTH PLAINFIELD, NEW JERSEY

CONTRACT NO. W912DQ-06-D-0006

SITE LOCATION

MAP

SCALE AS NOTED

MALCOLM PIRNIE, INC.
SEPTEMBER 2006
FIGURE 1

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Cornell-Dubilier Electronics facility and is being addressed by others. OU-2 consists of contaminated facility site soils and buildings which are being addressed by Malcolm Pirnie, Inc. This design addresses demolition of the existing site buildings; site soil contamination will be addressed through separate design documents. The groundwater and sediments in the adjacent Bound Brook will be addressed by the USEPA as part of future Operable Units. The response action selected in the Record of Decision (ROD) dated September 2004 for OU-2 buildings includes:

- 1. The demolition of the 18 on-site buildings; and two storage tanks.
- 2. Transportation of the building debris off-site for disposal, with treatment as necessary; and
- Relocation of eligible tenants at the former Cornell-Dubilier facility buildings
 pursuant to the Uniform Relocation Act, as necessary. The Government will be
 responsible for relocation of eligible site tenants.

1.2 Purpose and Scope

This Demolition Design Report (DDR) provides an overall description of the design for the demolition and removal of the on-site buildings and structures, including removal of slabs and below grade foundations. Site-specific details, such as building demolition sequencing and site-specific operations, are also addressed.

1.3 Description and Background

Cornell-Dubilier Electronics operated what is now the Hamilton Industrial Park from 1936 to 1962, manufacturing electronic components including capacitors. Polychlorinated biphenyls (PCBs) and chlorinated organic degreasing solvents were used in the manufacturing process, and it has been alleged that during Cornell-Dubilier Electronics' period of operation the company disposed of PCB-contaminated materials and other hazardous substances at the facility. A former employee has claimed that the rear of the property was saturated with transformer oils and that capacitors were also buried behind the facility during the same time



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period (Foster Wheeler, 2002). Based on historic site practices, portions of the Site have the potential to be contaminated with asbestos, lead, mercury, PCBs, TCE and dechlorination products, and other constituents of potential concern (COPCs).

1.4 Pre-Design Investigation – Buildings Data Summary Report

1.4.1 Sampling and Data Collection

Appendix A to the contract specifications contains a Data Summary Report (DSR) which summarizes all data collection activities performed in 2006 by Malcolm Pirnie. Data collected previously by others is also presented and referenced.

1.4.2 Analytical Results and Reporting

The locations and quantities of asbestos-containing materials and lighting ballasts to be removed as a result of the field identification program are shown on the Contract Drawings. Areas of PCBs and metals contamination of buildings are also shown on the contract drawings.

Potential PCB-containing materials observed during the field survey were limited primarily to light fixtures, with the exception of the three transformers mounted at grade at the northeast corner of Building 15. These transformers were not sampled, but are assumed to contain PCBs.

PCBs were also detected in wall and floor cores obtained from several buildings and within paint collected from wall surfaces.

Other potential hazardous materials identified during the field sampling program were generally limited to household hazardous wastes, such as small quantities of gasoline, lubricants, paint, weed killer, pool chemicals, and small propane tanks, which are included in the waste inventory tables on the drawings.



Building Cluster Design

SECTIO'

2

2.1 General

As mentioned in the previous section, a total of 18 buildings and two storage tanks exist within the site boundaries. Many of the buildings were constructed at or prior to the turn of the century and have potential historical significance. Part of the demolition design scope is to perform archaeological research to determine the historical significance of the site buildings. A number of the buildings on-site are also currently occupied by business tenants. The USACE Baltimore District is currently in the process of evaluating relocation of the business tenants to allow demolition to proceed. The relocation of site tenants is therefore not the responsibility of the Contractor and is not a requirement of the contract documents.

Based on current tenant information and the location and interconnection of structures and supporting infrastructure, buildings/structures were combined into discrete groups or "clustered" into 12 clusters (see Contract Drawing G-03). Each cluster contains one or more buildings/structures. The cluster formatting of the contract and bidding documents prepared for use by the demolition Contractor allows the USACE to obtain bids for each cluster, group(s) of clusters, or the entire project site. This flexibility will allow the USACE and the USEPA to choose the timing and allocate funds for the most advantageous staging of the demolition of buildings, allowing for consideration of tenant relocation, the results of the archaeological surveys/documentation, and funding considerations.



Page 2-2 Building Cluster Design



Cluster and Building Description 2.2

2.2.1 General

As previously noted, there are 18 buildings and two storage tanks included in the 12 building clusters. This section provides a brief description of each of the building/structure clusters. Plan and elevation views as well as color photographs of the buildings and structures are included on contract drawings G-04 through G-52. The building dimensions were measured during the predesign field investigation to prepare the elevation views shown on the drawings.

Most of the site buildings are open-bay, single-story masonry structures with steel roof framing and wood roofing decks. Interior masonry partition walls divide the larger buildings in Clusters 1, 2, and 3 into three or more separate tenant spaces. The attached Table 2-1, Structures to Be Demolished, includes a summary of building and structure features by cluster and identifies key elements of each building.

Since there are no existing as-built engineering drawings of the existing structures, it has been assumed that the buildings are constructed on 12-inch thick spread footings which extend to four feet below grade. All buildings on the site have complete or partial floor slabs. All of the buildings have interior columns except buildings 7, 8, 11, and 12. Building height varies from approximately 10 feet to approximately 48 feet, with an average height of approximately 20 feet. Dimensions were recorded during field reconnaissance by Malcolm Pirnie in 2006.

The only building with a basement is Building 15. The basement underlies the entire length and width of the former engine room and extends to approximately six feet below grade. The basement contains six individual piers consisting of three-foot thick concrete walls formed into squares and rectangles as supports for the suspended first floor slab above. Access to the basement is through Building 18.

Building 16, the former boiler house, contains a concrete coal bunker suspended from the ceiling which is approximately 20 feet wide, 20 feet tall, and extends the length of the building from north to south.

09/01/2006

TABLE 2-1
Cornell-Dubiller Electronics Superfund Site OU-2 Structures To Be Demolished

26 Storeroom / Etching / 1913 28 (Second Floor) 283 ft x 184 ft	Building Number Type of	Туре	Type of Construction	Roof Framing	Dimensions (ft) and Total Area of Building (SF)	Approx. Max Height (ft)	Former Building Designation /	Current Use/Tenant
26 (Second Floor) 283 ft x 184 ft 48,400 SF 26 Forming Tanks / 1914 26 Forming Tanks / 1914 26 Office / 1914 275 ft x 89 ft 24,500 SF 275 ft x 142 ft 3,000 SF 277 ft x 142 ft 43,900 SF 277 ft x 148 ft 11,300 SF 256 ft x 185 ft 278 ft x 148 ft 11,300 SF 278 ft x 148 ft 11,300 SF 278 ft x 149 ft 115 Etching Acid Room / 1916 15 Forming Tanks / 1916 16 Second Teating / 1914 17 Second Teating Tanks / 1916 18 Aging Racks / 1916 1926 ft x 148 ft 1930 SF 278 ft x 148 ft 11,300 SF 278 ft x 148 ft 15 Etching Room / 1916 15 Forming Tanks / 1916 16 Second Teating Acid Room / 1950 17 Feating Acid Room / 1950 18 Forming Tanks / 1916 19 Feating Acid Room / 1950	Single Story Masonry Structure with a Wood Roof	Single Story Masonry Structure with a Wood Roof		Steel Sawtooth Truss		92	Storeroom / Etching / 1913	Spring Coil Bedding, Inc.
263 ff x 184 ft 44,400 SF 26 Forming Tanks / 1914 26 Forming Tanks / 1914 26 Office / 1914 275 ft x 89 ft 20 Wax Room / 1913 275 ft x 142 ft 48 Plating / Photo Etching / 1917-1926 276 ft x 142 ft 20 Winding Room / 1917-1926 277 ft x 142 ft 20 SF 275 ft x 143 ft 15 Electric Generator Area / post-1300 SF 257 ft x 148 ft 15 Electric Generator Area / post-1300 SF 1500 SF	1A Two Story Masonry Structure with a Wood Roof	Two Story Masonry Structure with a Wood Roof		Steel SawtoothTruss	<u>.</u>	26 (Second Floor)	Testing / 1914	Vacant
26 Forming Tenke/ Reactors / 1914 100 ft x 51 ft	1B Single Story Masonry Structure with a Wood Roof	Single Story Masonry Structure with a Wood Roof		Steel SawtoothTruss	263 ft x 184 ft 48,400 SF	79	Forming Tanks / 1914	Vacant
26 Office / 1914 100 ft x 51 ft 5.100 SF 275 ft x 89 ft 24,500 SF 100 ft x 30 ft 3.000 SF 275 ft x 142 ft 3.000 SF 275 ft x 142 ft 3.000 SF 275 ft x 142 ft 12 Lab / 1917-1926 275 ft x 142 ft 12 Lab / 1917-1926 277 ft x 142 ft 15 Electric Generator Area / post-11,300 SF 256 ft x 185 ft 15 Echling Room / 1918 256 ft x 185 ft 15 Echling Room / 1918 257 ft x 145 ft 15 Echling Room / 1918 258 ft x 185 ft 15 Echling Acid Room / 1916 258 ft x 195 ft 15 Echling Acid Room / 1916 258 ft x 195 ft 15 Echling Acid Room / 1950 15 Echling Acid Room / 1950	1C Single Story Masonry Structure with a Wood Roof	Single Story Masonry Structure with a Wood Roof	L	Steel SawtoothTruss	.	26	Forming Tanks/ Reactors / 1914	Vacant
100 ft x 51 ft 5.100 SF 18 Aging Racks / 1916 24,500 SF 18 Aging Racks / 1916 24,500 SF 18 Aging Racks / 1916 100 ft x 30 ft 48 Plating / Photo Etching / 1917-1926 275 ft x 142 ft 12 Lab / 1917-1926 275 ft x 142 ft 20 Winding Room / 1917-1926 277 ft x 142 ft 20 Winding Room / 1917-1926 277 ft x 142 ft 20 Paint Spray / Washing / Drying Room / 1918 256 ft x 185 ft 24 ft 1950 Ft 15 Etching Room / 1918 256 ft x 185 ft 15 Forming Tanks / 1916 23 ft x 19 ft 19 Forming Tanks / 1916 23 ft x 19 ft 19 Forming Tanks / 1916 250 SF 190 SF 190 Ft 190	1D Single Story Masonry Structure with a Wood Roof	Single Story Masonry Structure with a Wood Roof		Steel SawtoothTruss	.	56	Office / 1914	Vacant
275 ft x 89 ft 18 Aging Racks / 1916 24,500 SF 18 Aging Racks / 1916 100 ft x 30 ft 48 Plating / Photo Etching / 1917-1926 3,000 SF 20 Winding Room / 1917-1926 274 ft x 142 ft 20 Winding Room / 1917-1926 257 ft x 44 ft 15 Electric Generator Area / post-11,300 SF 256 ft x 185 ft 24 Etching Room / 1918 256 ft x 185 ft 24 Forming Tanks / 1916 15 Etching Acid Room / 1950 6 23 ft x 19 ft 15 Etching Acid Room / 1950 23 ft x 19 ft 13 post-1947	Single Story Masonry Structure with a Concrete Roof	Single Story Masonry Structure with a Concrete Roof		18' deep Concrete Beams	100 ft x 51 ft 5,100 SF	70	Wax Room / 1913	Vacant
24,500 SF 18 Aging Racks / 1916 100 ft x 30 ft 30 ft 48 Plating / Photo Etching / 1917-1926 275 ft x 142 ft 12 Lab / 1917-1926 274 ft x 142 ft 20 Winding Room / 1917-1926 257 ft x 44 ft 15 Electric Generator Area / post-11,300 SF 257 ft x 44 ft 15 Etching Room / 1918 256 ft x 185 ft 24	Single Story Masonry Structure with a Wood Roof			Steel Girders / Timber Purlins	275 ft x 89 ft	18	Aging Racks / 1916	A&C Catalysys, Inc.
100 ft x 30 ft 48 Plating / Photo Etching / 1917- 1926 3,000 SF 275 ft x 142 ft 12 Lab / 1917-1926 43,900 SF 20 Winding Room / 1917-1926 Room / 1918 11,300 SF 15 Electric Generator Area / post-1930 A7,400 SF 15 Etching Tanks / 1916 Forming Tanks / 1916 Room / 1950	2A Single Story Masonry Structure S with a Wood Roof		ဟ	Steel Girders / Timber Purlins	24,500 SF	85	Aging Racks / 1916	Spice Distributor
275 ft x 142 ft 12 Lab / 1917-1926 39,100 ft 20 Winding Room / 1917-1926 43,900 SF 20 Winding Room / 1917-1926 257 ft x 44 ft 15 Electric Generator Area / post-11,300 SF 11,300 SF 256 ft x 185 ft 24 Etching Tanks / 1916 256 ft x 185 ft 24 Etching Tanks / 1916 257 ft x 19 ft 19 ft 15 Etching Acid Room / 1950 257 ft x 19 ft 19 ft 13 post-1947	3/4 Single Story Masonry Structure with a Wood Roof	Single Story Masonry Structure with a Wood Roof			100 ft x 30 ft 3,000 SF	48	Plating / Photo Etching / 1917- 1926	Complete Liquidation Company
274 ft x 142 ft 43,900 SF 20	4A Single Story Masonry Structure Sterwith a Wood Roof		Ster		275 ft x 142 ft 39,100 ft	12	Lab / 1917-1926	Complete Liquidation Company
43,900 SF 20 Paint Spray / Washing / Drying Room / 1917-1926 11,300 SF 15 Electric Generator Area / post-11,300 SF 24 Etching Room / 1918 256 ft x 185 ft 400 SF 15 Forming Tanks / 1916 15 Etching Acid Room / 1950 15 Etching Acid Room / 1950 16 500 SF 13 post-1947	Single Story Mesonry Structure Sterwith a Wood Roof		Ste		274 ft x 142 ft	20	Winding Room / 1917-1926	Fayette Trading
257 ft x 44 ft 15 Electric Generator Area / post-11,300 SF 24 Etching Room / 1918 256 ft x 185 ft 24 Forming Tanks / 1916 47,400 SF 15 Etching Acid Room / 1950 15 Etching Acid Room / 1950 500 SF 13 post-1947	5A Single Story Masonry Structure Stawith a Wood Roof		St	el Girders / Timber Purlins	43,900 SF	20	Paint Spray / Washing / Drying Room / 1917-1926	Complete Liquidation Company
24 Etching Room / 1918 256 ft x 185 ft 47,400 SF 15 Forming Tanks / 1916 15 Etching Acid Room / 1950 23 ft x 19 ft 13 post-1947	Single Story Masonry Structure with a Concrete Roof	Single Story Masonry Structure with a Concrete Roof		Steel Girders	257 ft x 44 ft 11,300 SF	15	Electric Generator Area / post- 1930	Keystone Plastics
256 ft x 185 ft 47,400 SF 15 Forming Tanks / 1916 15 Forming Tanks / 1916 15 Etching Acid Room / 1950 15 500 SF 13 post-1947	9 Single Story Masonry Structure with a Wood Roof	Single Story Masonry Structure with a Wood Roof	_	Steel SawtoothTruss		24	Etching Room / 1918	Vacant
/ Timber Purlins 47,400 SF 15 Forming Tanks / 1916 oth Truss / Steel 15 Etching Acid Room / 1950 Vood Purlins 23 ft x 19 ft 13 post-1947	9A Single Story Masonry Structure Si with a Wood Roof		ଊ	sel Girders / Timber Purlins	256 ft x 185 ft	24	Forming Tanks / 1916	Vacant
23 ft x 19 ft 13 post-1947	9B Single Story Masonry Structure Structure with a Wood Roof		Sta		47,400 SF	15	Forming Tanks / 1916	R&M Manufacturing, Inc.
23 ft x 19 ft 13 post-1947 500 SF	9C Single Story Masonry Structure with a Wood Roof	_	L <u>'</u> _ l	Steel Sawtooth Truss / Steel Girders / Wood Purlins		15	Etching Acid Room / 1950	Central Jersey Trading Company
	Single Story Masonry Structure 17 with Stuco Exterior and a Wood Roof	Single Story Masonry Structure with Stuco Exterior and a Wood Roof		Wood Joists	23 ft x 19 ft 500 SF	13	post-1947	Office assciated with Bidg. 9B

09/01/2006

TABLE 2-1
Cornell-Dubilier Electronics Superfund Sits OU-2 Structures To Be Demolished

Cluster Number	Building Number	Type of Construction	Roof Framing	Dimensions (ft) and Total Area of Building (SF)	Approx. Max Height (ft)	Former Building Designation / Year Constructed	Current Use/Tenant
9	10	Single Story, Steel Framing and Exterior Wall Panels with a Steel Roof	Steel Trusses	104 ft x 50 ft 5,200 SF	19	Oil House / 1917-1926	Chamberlain Power & Electric, Inc.
	10A	Single Story, Steel Framing with a Steel Roof	Steel Framing	40 ft x 20 ft 800 SF	10	Waste Shed	Vacant
,	ŧ	Single Story, Steel Arch with Corrugated Steel Exterior Panels	Steel Arches 4' oc with Steel Bridging between arches	200 ft x 41 ft	20	c. 1947	Complete Liquidation Company
-	12	Single Story, Steel Arch with Corrugated Steel Exterior Panels	Steel Arches 4' oc with Steel Bridging between arches	16,400 SF	20	1950	LIT Automotive
	13	Heavily Reinforced Single Story Masonry / Concrete Structure with a Concrete Roof	18' deep Concrete Beams	103 ft x 42 ft 4,400 SF	20	Machine Shop / 1912 or earlier	Nesser Metais & Alloys, LLC
	15	Single Story Masonry Structure with a Wood Roof	Steel Beams / Steel Purlins / Wood Deck	47.82.83	24	Engine Room / 1914	Franz Cabinet Company
c	16	Single Story Concrete / Masonry / Steel Structure with a Concrete / Steel Roof	50% Concrete / 50% Steel Beams / Corrugated Steel Deck	7,400 SF	94	Boiler House / 1917-1926	Townsend Bros. Moving & Storage
	18	Single Story Masonry Structure with a Half Wood and Half Concrete Roof	Wood Joists	17 ft x 9 ft 200 SF	14	1917-1926	DSC of Newark Enterprises Inc.
6	7	Single Story Wood Framing with a Wood Roof	Wood Joists	67 ft x 27 ft 1,800 SF	20	Carpenter Shop / 1917-1926 for foundation; superstructure likely post-1930	Dove Construction
10	NIA	Steel Water Tower	NA	25 Dia. 1700	110	N/A	Out Of Service
11	14	Single Story Wood Framing with a Timber Trusses Wood Purlins Wood Roof and Joists	Timber Trusses Wood Purlins and Joists	102 ft x 51 ft 5,200 SF	26	1917-1926	Vacant
12	N/A	Steel Oil Storage Tank	NA	27 Dia. / 600	30	NIA	Out Of Service

¹ Former Building Designation per Drawing Cornell-Dubiller Electric Corp., ET AL, Dated March 17, 1954



Project Coordination

SECTION

3

3.1 Coordination with Federal, State and Local Authorities

The project is a Superfund site. Accordingly, the Contractor is responsible for obtaining all local, state, and federal permits or permit equivalencies necessary to perform the work defined in this contract. The Contractor shall submit all permit equivalency applications to the Contracting Officer for review prior to submitting it to the applicable local, state or federal agency. All permits and permit equivalencies are to be obtained in the Contractor's name. All fees associated with the permits and permit equivalencies are to be borne by the Contractor. All hazardous waste manifests are to list the USEPA as the generator. Local permits, approvals, or notifications which will require compliance during demolition are as follows:

- Building/demolition permit;
- Street closure/traffic pattern alteration;
- Local utility notification for abandonment and disconnection of water, power, sewer, telephone and gas service to the various buildings at the site;
- South Plainfield Disaster Preparedness Agency;
- NJDEP Storage Tank Closure Bureau;
- USEPA Asbestos Removal Notification; and
- Trucking and Waste hauler Permits;

Coordination with the local authorities will be required to complete demolition of the buildings which border Hamilton Boulevard, specifically Clusters 1, 2, and 3. The excavation and removal of the footings of these structures along Hamilton Boulevard may require interruption or relocation of the buried telephone and gas facilities in that area from New Market Avenue to the northern edge of the site. Road closures and detours will need to be coordinated with the municipality of South Plainfield. The



Page 3-2 Project Coordination



specifications indicate the required permit requirements, work plans, environmental monitoring, and control measures to be taken during the project to mitigate project impacts on the surrounding community, as discussed in the following sections.

The USEPA and USACE will coordinate site access and tenant relocation with the site property owner and will arrange public notification meetings to brief local citizen and business owners regarding the project and measures being undertaken to accommodate their needs.

3.2 Site Utilities and Coordination

The utilities which currently serve the site are outlined below. This limited utility site information was collected by Malcolm Pirnie through on-site interviews with site owner management personnel in 2006, and also via a site drawing provided by the site owner. This information is presented on the Site Utility Drawing, Contract Drawing G-53

3.2.1 Electric Power

Electric power for all buildings and structures except for Building 1 and Building 2 is delivered via an overhead pole-mounted high voltage system which enters the site at the southwest corner at Hamilton Boulevard and New Market Avenue. The distribution line extends eastward along the south side of Building 5 to the rear of Building 12, and then northward to the north side of the oil storage tank. From there it splits and runs north to the south side of Building 9C, west to Building 10, and northeast to the north property line. From the north property line, it extends westward to Buildings 7 and 8. The electrical lines described above are constructed on a PSE&G easement. Buildings 1 and 2 are connected to the power lines on Hamilton Boulevard. The disconnection of the individual power services to the buildings on-site will not pose any significant difficulties. The close proximity of the poles to the south wall of Building 5 however, may require temporary deenergization or relocation of incoming site power while Building 5 is being demolished. Alternatively, the poles could be braced, or temporary generators could be brought to the site and connected.



Project Coordination

Page 3-3

3.2.2 Natural Gas

Buried natural gas lines enter the site via the main on Hamilton Boulevard and extend eastward as far as Building 14. There are reportedly individual gas shutoff valves at each building which must be located to disconnect and remove each structure; these valves have not been observed by Malcolm Pirnie. The route of the buried gas piping which was marked by a utility location service in the spring of 2006 is shown on the Site Utility Drawing Contract Drawing G-53.

3.2.3 Telephone and Communication Cable

Telephone cables enter the Site from Hamilton Boulevard primarily between Buildings 1 and 2. Individual tenants must be contacted for disconnection notices.

3.2.4 Site Water Systems, Including Fire Protection

The site domestic and fire protection systems are connected to a 36-inch main which transects the Site from southwest to northeast, originating at Building 5 and extending northward across the site on the north side of Building 11 and the south sides of the oil tank and Building 14. The known location of the fire protection loop which serves virtually all of the on-site buildings which have internal sprinklers mounted on their ceilings is shown on the Site Utility Drawing, Contract Drawing G-53. Surface scans prior to excavation and test pit work by the Contractor will be necessary to locate domestic water service connections. Since it is undesirable to repeatedly de-energize and re-energize the fire protection loop at the site, provisions have been included in the Bid Schedule to abandon the fire protection lines on the exterior of the buildings while the system is charged, without the need for shutdowns.

According to the site owner, the capability to disconnect the fire protection loop via existing functioning valves for the site buildings is as follows:

Cluster 5: Buildings 9 and 9A can be isolated as a unit;



Page 3-4 Project Coordination



Building 10 can be isolated individually; Cluster 6:

Buildings 13, 15, 16, and 18 can be isolated as a combined unit, however Cluster 8: the hydrant in front of Building 15 would need to be shut off, possibly requiring the installation of a new replacement hydrant to meet fire code requirements;

Cluster 7: Buildings 11 and 12 can be isolated individually;

Building 14 will require an exterior line stop for disconnection while the Cluster 11:

system is energized;

Cluster 9: Building 7 is not connected.

The remaining Buildings in Clusters 1, 2, 4, and 5 cannot be isolated individually, and would require shutdown of the entire fire protection system for disconnection and demolition to proceed.

3.2.1.1 Building Sanitary Sewers

The building sanitary sewers will require disconnection during demolition of the buildings. The site sanitary sewer runs along the north and eastern sides of the Site and leaves the Site at the intersection of Spicer Avenue and Fulton Street. Flow is generally to the north and east and reportedly connects to the sewer on the east side in the vicinity of Building 13. Surface scans prior to excavation and test pit work by the Contractor will be necessary to locate sanitary sewer service connections.

3.2.1.2 Site Drainage

The location of known site catch basins and drainage piping is shown on the Site Utility Drawing, Contract Drawing G-53. Surface scans prior to excavation and test pit work by the Contractor will be necessary to locate site drainage piping. Roof drainage piping will be disconnected at the perimeter of each building being demolished. The site drainage inlets will be temporarily blocked during construction to prevent the entry of potentially



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contaminated runoff until the slab restoration, including pavement installation, has been completed. Once slab restoration is completed, the temporary closures will be removed to once again facilitate site drainage.

3.3 **Utility Contacts**

Coordination with utility owners will be required prior to and during demolition to plan for outages or permanent disconnection and abandonment of utility connections. As previously mentioned, The Site Utility Drawing, Contract Drawing G-53, indicates the known locations of buried and overhead mains and service connections based upon field survey and location by the buried utility locating service, and information provided by the site owner. This drawing and the scope of the planned demolition project will be reviewed with the operators of the various utilities which serve the site by Malcolm Pirnie during the 95% completion phase to gain their input and concurrence; the 75% design documents have been forwarded to the utility companies for their information.

A summary of contact information for on-site utilities is provided in Table 3-1.



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2.			FORMATION ESE	38-1 23 8 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
Utility	Owner	Contact Person	Address	Phone Number
Water	New Jersey American Water	Michael Wolan	120 Raider Boulevard P.O. Box 11204 Belle Mead, NJ 08502	(908) 301-3025
Sanitary Sewer	South Plainfield Sewer Utility	Joseph Glowacki	2480 Plainfield Avenue South Plainfield NJ 07080	(908) 220-7711
Gas	Public Service Electric &Gas Co.	Richard Weger	40 Rock Avenue Plainfield, NJ 07063	(908) 668-3837
Electric	Public Service Electric &Gas Co.	Rudy Torres	472 Weston Canal Road Somerset, NJ 08873	(732) 764-3127
Telephone	Verizon Communications	Gary S. Stevenson	445 Georges Road North Brunswick NJ 08902	(732) 418-2620



SECTION

4

4.1 Demolition Sequence

Initial demolition efforts may be directed at the buildings along the southern and eastern ends of the Site. Buildings 14, 5A, 10, 11, and 12 can be isolated from existing utilities and removed as discrete entities. Demolition of Cluster 8, which includes Buildings 13, 15, 16, and 18, will preferably be done as a unit since they are all fed by the underground fire suppression system via a common connection on the south side of Building 15. Demolition of Clusters 1, 2, and 5, which comprise more than 50 percent of the site buildings, must be done as a unit since the fire suppression system must be completely shut down for that work to be completed and will require that all site tenants be relocated prior to that point in time. All site tenant relocations will be the responsibility of the Government.

The demolition of the elevated water tower should likely follow the demolition of Building 14 to allow for access by heavy equipment from the east, and should precede the demolition of the buildings in Cluster 8 due to the tower height and proximity to those buildings.

4.2 Cluster Demolition Activities

Demolition activities for each individual cluster will generally include the following activities in the approximate sequence shown. Each of these activities is briefly discussed in the following subsections.

- Prepare Schedules and Submittals
- Implement Site Environmental Monitoring and Controls



- Sample and Characterize Tank Contents and Hazardous Substances
- Remove Asbestos
- Demolish Buildings and Structures
- Handle and Dispose of Waste Materials
- Backfill Placement and Slab Restoration
- Closeout and Demobilization

4.2.1 Schedules and Submittals

The Contractor will be required to develop an overall project schedule and individual cluster project schedules. Additionally, the Contractor will be required to develop work plans which will address the entire site and incorporate the specific measures to be employed for each cluster to be demolished, including Soil Erosion and Sediment Control, Excavation and Material Handling / Reuse, Site Security, Quality Control Traffic Control, Pest and Rodent Control, Waste Management, and Sampling and Analysis. The details for the contents and preparation standards for each of these plans are contained in the contract specifications. Guidance for Dust Control, Spill Prevention, and Site Safety and Health are discussed in Section 5.0, Health and Safety.

4.2.2 Site Environmental Monitoring and Controls

Prior to demolition, the Contractor will be required to mobilize temporary facilities, erect security fencing around the perimeter of the work areas (i.e., a fenceline around each cluster), and enact measures to control the impact of the project on the environment and the neighboring residents as discussed in the remainder of this section. The Contractor lay down, storage and stockpiling areas will generally be situated in undisturbed areas as shown on Contract Drawing G-03. The locations and conceptual traffic patterns shown on G-03 are schematic, based upon beginning of demolition on the eastern side of the site. Upon removal of each structure, and as the relocation of business tenants from the site proceeds, the available open space will expand and potential traffic interferences will diminish, providing additional opportunities to reroute traffic on-site



Page 4-3

and to optimize stockpile locations. The Contractor trailers will be located within the area shown on G-03.

4.2.2.1 Site Security

The Contractor will be required to provide continuous security at the construction site during all non-work times, including overnight hours, weekends, and holidays. In addition, prior to commencement of any demolition, excavation, or construction work at any cluster at the Cornell-Dubilier Site, a six-foot high chain link fence with gates will be installed around that cluster undergoing demolition, approximately ten feet from the demolition/excavation limits, as shown on the contract drawings. Upon the completion of all cluster-related remedial action activities, and with the approval of the Contracting Officer, the fencing will be removed.

4.2.2.2 Stormwater Control and Erosion / Sediment Control

Stormwater control is necessary to prevent the flow of uncontaminated runoff into excavations and minimize the quantity of water to be treated and disposed. Means and methods for diversion of stormwater and minimization of potential for erosion will be determined by the Contractor and discussed in the Erosion and Sediment Control Plan. Stormwater control will include sequencing work to limit open areas which would produce runoff into excavations, minimizing the size of excavations left open, covering open areas to prevent contact between contaminated materials and precipitation, and may include temporary sumps and pumping. Any stormwater that does enter the excavations will be considered impacted and will require collection and treatment prior to disposal.

4.2.2.3 Traffic and Pedestrian Control

The primary construction access to the site is from Hamilton Boulevard at the southwest corner of the site as shown on G-03. Alternate site access could be provided by construction of a temporary access road in the unimproved section of Garibaldi Avenue from Spicer Avenue to the south side of Cluster 7. This would allow construction and

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Demolition Components



haul vehicles to avoid the traffic congestion at the intersection of Hamilton Boulevard and New Market Avenue. It may be necessary to provide alternate site access during the removal of Building 5 due to the proximity of the south side of the building to the main site access and to the incoming power poles on the south side of the building.

Traffic control measures will be necessary on Hamilton Boulevard when trucks are entering and exiting the site. Temporary controls will include the use of signs to advise of construction ahead, flagmen, and temporary barriers such as cones, safety fences, and safety tape. Pedestrian controls are anticipated for the duration of the work along Hamilton Boulevard. Closure of the sidewalk on the east side of Hamilton Boulevard during demolition of the west sides of Clusters 1, 2, and 3 will be necessary to protect the public.

The traffic control plan to be prepared by the Contractor will address traffic and pedestrian control means and methods. The plan will also identify haul routes to and from the site. Haul routes and alternatives will be discussed with the Borough of South Plainfield. Traffic control and pedestrian control within the site will also be addressed in the Contractor's traffic control plan, and will be based upon the particular cluster being demolished, the staging of cluster demolition, and active utilities during various project stages.

4.2.2.4 Pest and Rodent Control

There is a potential for neighborhood disturbances caused by off-site travel of pests and rodents that may be living in structures to be demolished. The Contractor is required to employ a licensed professional exterminator prior to beginning demolition to prepare and submit a pest and rodent control plan, to implement the pest control measures outlined, and to make periodic site visits to review the success of measures in place and revise the practices as necessary. At the conclusion of demolition, the exterminator is required to return to the site to remove all residual bait, traps, and similar devices.



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4.2.3 Sampling and Characterization

All liquids, sludges, and solids from tanks, drums, and other containers on-site are to be sampled and the contents analyzed in accordance with the requirements of the specifications. Sampling procedures are to be in accordance with procedures in the appropriate USEPA and NJDEP guidance documents. Field log documentation of all drum sampling activities and a chain of custody for the samples collected are to be maintained at the site.

4.2.4 Asbestos Abatement

Prior to the demolition of each structure which contains asbestos-containing materials as quantified on the contract drawings, the Contractor will provide the necessary notification to the USEPA and will install all temporary equipment, barriers, and facilities necessary for worker and environmental protection. All asbestos workers are to be trained and certified to perform asbestos removal work. All asbestos removal, transportation and disposal, air monitoring, decontamination, and related tasks are to be performed in accordance with the contract specifications.

4.2.5 Building and Structure Demolition

Demolition of each building and structure will commence following the removal of hazardous substances and verification that all utilities have been disconnected and abandoned. Since recent limited sampling indicates that the existing roofing materials contain asbestos, the roofing must be removed and disposed of separately as asbestos-containing materials prior to demolition of the remainder of the structure. The specifications contain a notice to the Contractor that the steel framing and other building components have not been tested for lead-based paint, but rather it has been assumed that the paint is lead-based. The paint has been tested for PCBs, however, and the results indicate that the paint in some areas does contain PCBs. The Contractor will be required to sample and decontaminate all building steel to be recycled and to coordinate disposal





of all building materials within the requirements of the disposal facility operating permits.

PCBs were also detected in paint chip samples and concrete floor and masonry wall cores collected in April 2006. One sample contained over 50,000 mg/kg, and other samples had levels in the hundreds of ppm. All building materials with concentrations of PCBs greater than 50 mg/kg must be disposed of as PCB bulk product waste or PCB remediation waste in accordance with applicable regulations.

The light weight of the framing systems for the buildings at the site and their relatively low profile do not pose any particular challenges to demolition. There is adequate space around most of the buildings to allow demolition to proceed rather quickly, with the exception of the west side of Clusters 1, 2, and 3. Their proximity to Hamilton Boulevard will require traffic and utility protection and control for removal of both above- and below-grade sections of the buildings, as previously discussed. Furthermore, the presence of tenants in adjacent or proximate buildings is likely, especially at the outset of demolition activities. The Contractor is required to exhibit extreme caution when operating under this scenario.

The specifications for demolition require the Contractor to minimize the volume of soil removed as part of foundation demolition to reduce the quantity of contaminated soil to be stockpiled, tested, and disposed of under this project. The Contractor's Excavation Plan is to propose the equipment and methods which will be employed to limit the size of excavation necessary for foundation removal and to loosen and dislodge attenuated soils which may cling to below-grade concrete as it is removed. The Contractor is also required to submit a Excavation and Material Handling / Reuse Plan to outline methods that will be employed to comply with NJDEP on-site soil reuse requirements, should it be determined that excavated soils are within NJDEP contamination guidelines and can be reused on-site (see section 4.2.6 below).



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4.2.6 Handling and Disposal of Materials

Uncontaminated Construction and Demolition (C&D) materials are to be transported directly from the site to a permitted disposal facility.

Material which is believed to be contaminated based upon previous testing, and all soil excavated for test pits, samples, and utility disconnection or abandonment, is to be stockpiled in a prepared, lined stockpile area as required by the specifications. The soils will then be sampled and tested for hazardous characteristics per the contractors approved sampling plan prepared in accordance with the requirements of the Contract Documents. Soils with contaminant concentrations which are below the New Jersey DEP's Impact to Groundwater Soil Cleanup Criteria (IGWSCC) concentrations may be reused on the site as foundation excavation backfill. If soils with contaminant concentrations below the IGWSCC but above the Residential Direct Contact Soil Cleanup Criteria (RDCSCC) or Non-Residential Direct Contact Cleanup Criteria (NRDSCC) are reused on-site, then they must be addressed with a Deed Notice if greater than the RDCSCC, and engineering controls if greater than the NRDSCC. Excavated soils must also possess adequate geotechnical characteristics for reuse. The Contractor is required to outline soil reuse approaches in his Excavation and Material Handling / Reuse Plan.

Contaminated C&D material disposal is dependent on the material waste characterization, including:

- Non-hazardous
- TSCA PCBs >50 ppm
- TSCA PCBs>500 ppm,
- RCRA Hazardous
- Mixed TSCA and RCRA, with PCBs > 50 ppm and < 500ppm
- Mixed TSCA and RCRA, with PCBs > 500 ppm





[NOTE TO REVIEWERS: the waste categories for PCBs > 50 ppm and > 500 ppm for porous material will be coalesced into one category (PCBs > 50ppm) for the 100% submittal]

As previously discussed in Section 1.4, sampling to determine the extent of PCB, mercury, and other metals contamination at the site was conducted in April 2006 during the Pre-Design Investigation. Material samples where taken for each cluster and included: paint chips, wall cores, floor cores, and window caulking. All results are presented in the Data Summary Report included as Appendix A to the contract specifications.

In order to estimate the quantities of contaminated C&D material which will require disposal as a hazardous material, the locations and concentrations of PCBs and RCRA metals (lead) were indicated on the Contract Drawings. The extent of contamination was indicated for the floors and walls of buildings where contamination was detected using different shading patterns for two PCB contamination (TSCA) concentrations corresponding to 50 ppm to 500 ppm and greater than 500 ppm, and for RCRA Metals.

The method for shading contaminated floors consisted of plotting the floor core locations on the Contract Drawings and shading the locations where contamination was present. For instances where floor contamination does not encompass the entire building, the shading was terminated approximately halfway between a contaminated floor core sample and a core sample where the contaminant in question, either PCBs (50 ppm to 500 ppm or greater than 500 ppm) or RCRA metals were not detected. The contaminated floor area quantities were then determined by measuring the shaded floor areas.

The extent of wall contamination for PCBs and metals was determined by the contamination level, as mentioned above, for the wall cores, paint chip samples, and window caulking. Wall shading consisted of plotting the sample locations and shading the locations where contamination was present. For those locations where paint chip sample concentrations were higher than the window caulking and wall cores, the area of the wall was shaded at the higher concentration. For instances where the wall



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contamination did not extend around the entire building, the shading was terminated approximately half way between a contaminated wall sample and a wall core sample where contamination was not detected.

Contaminated soil disposal is also dependent on sampling and characterization according to the following categories:

- Non-hazardous reuse on-site, < IGWSCC and subject to conformance with NJDEP R/N DCSCC
- Non-hazardous but contaminated, > IGWSCC
- TSCA PCBs > 50 ppm and < 500 ppm
- TSCA PCBs > 500 ppm
- RCRA Hazardous
- Mixed TSCA and RCRA, with PCBs > 50 and < 500 ppm
- Mixed TSCA and RCRA, with PCBs >500 ppm

The volume of contaminated soils to be disposed of as hazardous material and the volume of contaminated concrete foundations resulting from contact with contaminated soils was determined by using previous site soil contamination mapping to estimate the percent of area of each building located where soil contamination has been documented. Figures 4-12 and 4-27 from the Remedial Investigation (RI) (Foster Wheeler 2002) were used to determine the extent of PCB contamination (PCBs >500 ppm). Figures 1 and 2 from the Final Transportation and Disposal (T&D) Feasibility Study Technical Memorandum (Malcolm Pirnie, July 2006) were used to determine the extent of potential RCRA Metals contamination. The boundaries of the different hazardous soils constituents were overlain onto the demolition site plan drawings. The soil trench that will be excavated during removal of slabs and footings was then segmented based on the various types of contaminants shown on the RI and T&D figures, and totaled into the categories listed above. Removed subsurface concrete was similarly segregated into the same categories based on proximate soil concentrations. The footings are assumed to be

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Demolition Components



a standard tee footing approximately one foot wide by four feet deep. The calculated volume of soil excavated for foundation removal includes the immediate area around the footing extending from the outside edge of the footing to grade on a 1:1 side slope.

Estimates by weight of the quantity of each non-hazardous and hazardous waste type and excavated soils are presented in the quantity takeoff in Appendix A.

4.2.7 Backfill and Slab Restoration

The area previously occupied by each building slab will be compacted and graded to remove surface irregularities. A non-woven geotextile will then be placed over the compacted subgrade, the area will be backfilled with dense graded aggregate, compacted to a dry density of 95 percent and graded to a minimum slope of 1.5 percent. The area will then be paved with three inches of bituminous surface course. The Contractor's proposed grading will address site drainage.

4.2.8 Closeout and Demobilization

Closeout and demobilization from the site will occur following the submittal of all required documentation to the Contract Officer, including record drawings, waste manifests, tank closure reports, health and safety clearance documents, and site photographs. Documentation submittal will occur simultaneously with the removal of all temporary facilities, equipment, trash, waste, and debris required by the contract specifications.



Health and Safety

FCTION

5

5.1 Site Safety and Health Plan (SSHP)

The Contractor is responsible for the health and safety of its employees as well as the actions of its subcontractors. The Contractor will therefore develop, implement, and oversee site safety and health procedures as required by the approved SSHP, prepared by the Contractor and reviewed by the Government Safety Officer in accordance with Technical Specification Section 01351 Safety, Health, and Emergency Response. The SSHP will establish, in detail, the protocols necessary for anticipation, recognition, evaluation, and control of hazards associated with each task performed. The SSHP will be considered a living document and will be updated as occupational health and safety conditions change over the course of the project. The minimum requirements of the SSHP are briefly described in the following sections.

5.1.1 Hazard / Risk Analysis

The SSHP shall include a safety and health Hazard/Risk Analysis for each site task and operation to be performed. The Hazard/Risk Analysis shall provide information necessary for determining safety and health procedures, equipment, and training to protect on-site personnel, the environment, and the public. The Hazard/Risk Analysis will include the following components:

- Site Tasks and Objectives Description
- Potential Hazard Description (Physical, Chemical, Biological)
- Air Quality Action Limits (Lead, Dust, Asbestos, Oxygen, Combustible Gas, Volatile Organic Compounds, PCBs, etc)

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- Confined Space Entry Program
- Welding Program
- Activity Hazard Analysis

5.1.21 Staff Organization, Qualifications, and Responsibilities

The Contractor will be required to develop an organizational structure that sets forth lines of authority (chain of command), responsibilities, and communication procedures concerning site safety, health, and emergency response. At a minimum, the roles and responsibilities of the following personnel will be described:

- Safety and Health Manager
- Additional Professional Health and Safety Support Personnel
- Site Safety and Health Officer
- · Safety and Health Technicians
- Occupational Physician
- Other Persons Certified in First Aid/CPR

5.1.3 Site Safety Reference Materials

The Contractor will be required to include safety-related references applicable to the project in the SSHP and maintain them at the field office as appropriate for the duration of the project.

5.1.4 Health and Safety Training Program

The SSHP will include a section describing training requirements. Copies of current health and safety training documentation will be submitted prior to initial entry onto the work site and attached to the SSHP. Copies of recent training certificates shall be kept on site, along with medical surveillance, fit testing, and a physician's or health care provider's written opinion that employee is fit for duty.



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5.1.5 Personal Protective Equipment (PPE) Program

The SSHP will detail the minimum PPE ensembles (including respirators) and specific materials from which the PPE components are constructed for each site-specific task and operation to be performed based upon the Hazard/Risk Analysis. Components of levels of protection (B, C, D and modifications) will be relevant to site-specific conditions, including heat and cold stress potential and safety hazards

5.1.6 Medical Surveillance Program

The Safety and Health Manager, in conjunction with the Occupational Physician, will detail, in the Contractor's Safety and Health Program and the SSHP, the Medical Surveillance Program that includes scheduling of examinations, certification of fitness for duty, compliance with OSHA requirements, and information provided to the physician. The Medical Surveillance Program will include the following requirements:

- Frequency of Examinations
- Content of Examinations
- Information Provided to Occupational Physician
- Physician's Written Opinion
- Medical Records

5.1.7 Environmental Monitoring Program

An Environmental Monitoring Plan (EMP) shall be part of the SSHP and shall provide for Exposure Monitoring/Sampling Results for occupational and non-occupational exposures. The EMP will be designed to detect and quantify respirable dust, lead, volatile organic compounds, oxygen levels, combustible gases, airborne asbestos, and PCBs. Action levels will be established by the Contractor as specified in the Air Quality Limits component of the Hazard/Risk Analysis. A table titled "Minimum Acceptable Community Action Levels" included in specification Section 01351, Health, Safety, and Emergency Response, provides a listing of



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minimum contaminant concentrations for respirable dust, lead, volatile organic compounds, oxygen levels, combustible gases, and airborne asbestos. Specification Section 13285, Removal and Disposal of PCB Contaminated Soils and Concrete, contains the permissible exposure limit (PEL) for PCBs.

Air contaminant levels will be monitored during each on-site activity in each medium through which contaminants can enter the worker's breathing zone or the neighboring properties (perimeter air sampling). At the beginning of each work activity requiring air monitoring/sampling, the Contractor shall complete monitoring/sampling at the locations and frequencies stated in the SSHP. The Contractor will be required to provide real-time air monitoring equipment for total organic vapors, explosive gases, oxygen, and respirable airborne particulates. Meteorological monitoring will also be conducted.

5.1.8 Heat and Cold Stress Monitoring Program

The Safety and Health Manager will develop a heat stress and cold stress monitoring program for on-site activities. Details of the monitoring program, including schedules for work and rest and physiological monitoring requirements, will be described in the SSHP.

5.1.9 Safety Procedures, Engineering Controls, and Work Practices

The SSHP will describe the standard operating safety procedures, engineering controls, and safe work practices to be implemented for the work covered. These will include, but not be limited to the following:

- General Site Rules and Prohibitions
- Excavation and Trench Safety
- Fall Protection
- **Hazard Communication**
- Hearing Protection and Noise Control
- **Electrical Safety**



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- Sanitation
- Fire Protection
- **Emergency Action Plan**

5.1.10 Site Control Measures

To prevent the spread of contamination and control the flow of personnel, vehicles, and materials into and out of work areas, the following site control measures will be established and described in the SSHP:

- Work Zone Designations
- Site Control Log
- Communications Procedure
- Site Security

5.1.11 Contamination Monitoring, Decontamination, and Personal **Hygiene Protocol**

Personnel entering the exclusion or contamination reduction zones, or are otherwise exposed or subject to exposure to hazardous chemical-contaminated material vapors, liquids, or contaminated solids will adhere to approved contamination monitoring, decontamination, and personal hygiene protocol, which will be detailed in the SSHP.

5.1.12 Equipment Contamination Procedures

Vehicles and equipment will be monitored for contamination and decontaminated prior to leaving the site. The procedures for contamination monitoring and decontamination of vehicles and equipment will be addressed in the SSHP.

Health And Safety



5.1.13 Emergency Equipment and First Aid Requirements

The SSHP will describe the emergency and first aid equipment that will be available on site. The following items, at a minimum, shall be maintained on site and be available for immediate use:

- First Aid Equipment
- Emergency Eyewashes and Showers
- Emergency Use Respirators
- Fire Extinguishers

5.1.14 Emergency Response Plan

An Emergency Response Plan will be developed and implemented as a section of the SSHP. In the event of any emergency associated with remedial action, the Contractor shall, without delay, alert all on-site employees that there is an emergency situation; take action to remove or otherwise minimize the cause of the emergency; alert the Contracting Officer's Representative; and institute measures necessary to prevent repetition of the conditions or actions leading to, or resulting in, the emergency.

5.1.15 Accident Prevention Plan

An Accident Prevention Plan will be developed and submitted for government approval prior to work initiation. The plan will be job-specific and include any unusual or unique aspects of the project. Daily safety and health inspections shall be conducted to ensure that the work is being performed in accordance with the SSHP and all USACE and OSHA regulations.

5.1.16 Dust Control Plan

A proposed Dust Control Plan will be included in the SSHP and be incorporated by reference in the Environmental Monitoring Plan. The Dust Control Plan will identify materials, equipment,



Health And Safety Page 5-7

and methods to be used to monitor and control dust during project operations, including provisions for supplying clean water and trailer-mounted water spraying equipment. Visible dust located on the floors of buildings to be demolished will be handled as if contaminated with PCBs and will be cleaned up and removed prior to beginning demolition activities. The Contracting Officer will be consulted on the determination of proper handling procedures.

5.1.17 Safety and Health Phase-Out Report

A Safety and Health Phase-Out Report will be submitted within ten days following completion of the work, prior to final acceptance of the work. At a minimum, the report will include the following:

- Summary of Overall Safety Performance
- Final Decontamination Documentation
- Summary of Exposure Monitoring and Air Sampling
- Signature of Safety and Health Manager and SSHO

The following documents are required and must be evaluated, updated, and provided to the USACE along with the Contractor's Health and Safety Plan:

- Written Hazard Communication Program
- Written Noise and Hearing Conservation Program
- Written Confined Space Entry Program
- **Excavation Safety Program**
- **Emergency Response Plan**
- **Emergency Evacuation Procedure**
- Written Personal Protective Equipment Policy
- Respiratory Protection Program
- Medical Surveillance Program



5.2 Site Control and Work Zone

The building demolition and excavation work is being performed in phases (to be determined by the USEPA). Prior to the commencement of work in a given cluster, a six-foot high chain-link fence will be constructed around the entire cluster area. The contractor shall follow the Health and Safety requirements set forth in the technical specifications for site control.

Exclusion and work zones will be set up and maintained in accordance with the Contractor's Excavation and Material Handling Plan and Site Safety and Health Plan.

5.3 Air Monitoring

Equipment for continuous perimeter and personal air monitoring will be required for the duration of demolition, excavation, backfilling, and restoration activities at this property. Air monitoring will include equipment and monitoring frequencies required as described in Specification Section 01351 Safety, Health, and Emergency Response. Monitoring parameters and action levels are as indicated in Section 01351.

Construction Quantity Section Takeoff 6

6.1 **Construction Quantities**

Material quantities per ton for masonry, wood, glass, steel framing members, abovegrade concrete, and roofing materials are tabulated on individual sheets for each building cluster in the quantity takeoff spreadsheet which is provided in Appendix A. A summary sheet for all clusters is also included in the quantity takeoff spreadsheet. The nonhazardous fraction of these materials will be removed and disposed of off-site under the lump sum items for Above Grade Demolition and Off-Site Disposal which are included in the Bid Schedule. Roofing materials which contain asbestos are quantified on the Contract Drawings. Non-porous materials such as steel which are to be recycled must first be sampled, and if necessary, decontaminated in accordance with 40 CFR 761.79 Decontamination Standards and Procedures.

The quantity takeoff spreadsheet also includes material quantities for each building cluster for hazardous above-and below-grade concrete and masonry, contaminated soils, and quantities for bituminous surface course, dense graded aggregate, and geotextile. These material quantities are represented on the Bid Schedules as unit price items. The unit quantities shown on the quantity takeoff spreadsheet for these items have been rounded up on the Bid Schedules. The construction cost estimate backup data to be provided under separate cover includes a detailed explanation of assumptions and clarifications.

Construction Schedule 6.2

A detailed construction schedule meeting the requirements of Specification Section 01320A, Project Schedule is required to be prepared and provided by the Contractor based upon the scope of work awarded and the sequence of demolition approved by the USACE.



Design Drawings

SECTION

7

7.1 Design Drawings

The design drawings for the demolition are bound separately and include the following:

DRAWING NO.	TITLE
G-01	Cover Sheet
G-02	Index of Drawings, Legend, Abbreviations
G-03	Site Plan/Cluster Designations
G-04	Cluster 1-BLDGS 1, 1A, 1B, 1C, 1D, 6 Plan And Elevations
G-05	Cluster 1-BLDGS 1, 1A, 1B Miscellaneous Waste
G-06	Cluster 1-BLDGS 1C, 1D, 6 Miscellaneous Waste
G-07	Cluster 1-PCB Hazardous Floors and Walls
G-08	Cluster 1-BLDGS 1, 1A, 1B, 1C, 1D, 6 Photographs
G-09	Cluster 2-BLDGS 2, 2A, 3/4, 4A Plan And Elevations
G-10	Cluster 2-BLDGS 2, 2A, 3/4 Miscellaneous Waste
G-11	Cluster 2-BLDG 4A Miscellaneous Waste
G-12	Cluster 2-PCB Hazardous Floors and Walls
G-13	Cluster 2-BLDGS 2, 2A, 3/4, 4A Photographs
G-14	Cluster 3-BLDGS 5, 5A Plan And Elevations
G-15	Cluster 3-BLDGS 5, 5A Miscellaneous Waste
G-16	Cluster 3-PCB Hazardous Floors and Walls

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DRAWING NO.	TITLE
G-17	Cluster 3-BLDGS 5, 5A Photographs
G-18	Cluster 4-BLDG 8 Plan And Elevations
G-19	Cluster 4-BLDG 8 Miscellaneous Waste
G-20	Cluster 4-BLDG 8 Photographs
G-21	Cluster 5-BLDGS 9, 9A, 9B, 9C, 17 Plan And Elevations
G-22	Cluster 5-BLDGS 9, 9A Miscellaneous Waste
G-23	Cluster 5-BLDGS 9B, 9C, 17 Miscellaneous Waste
G-24	Cluster 5-PCB Hazardous Floors and Walls
G-25	Cluster 5-BLDGS 9, 9A, 9B, 9C, 17 Photographs
G-26	Cluster 6-BLDGS 10, 10A Plan And Elevations
G-27	Cluster 6-BLDG 10 Miscellaneous Waste
G-28	Cluster 6-PCB Hazardous Floors and Walls
G-29	Cluster 6-BLDGS 10, 10A Photographs
G-30	Cluster 7-BLDGS 11, 12 Plan And Elevations
G-31	Cluster 7-BLDGS 11, 12 Miscellaneous Waste
G-32	Cluster 7-PCB Hazardous Floors and Walls
G-33	Cluster 7-BLDGS 11, 12 Photographs
G-34	Cluster 8-BLDG 13 Plan And Elevations
G-35	Cluster 8-BLDG 13 Miscellaneous Waste
G-36	Cluster 8-BLDG 13 Metal Hazardous Masonry Walls
G-37	Cluster 8-BLDGS 15, 16, 18 Plan Elevations
G-38	Cluster 8-BLDGS 15, 16, 18 Miscellaneous Waste
G-39	Cluster 8-BLDGS 15, 16, 18 Metal Hazardous Masonry Walls
G-40	Cluster 8-BLDGS 13, 15, 16, 18 Photographs
G-41	Cluster 9-BLDG 7 Plan And Elevations

Design Drawings

Page 7-3

DRAWING NO.	TITLE
G-42	Cluster 9-BLDG 7 Miscellaneous Waste
G-43	Cluster 9-BLDG 7 Photographs
G-44	Cluster 10-Water Tower Plan And Elevations
G-45	Cluster 10-Water Tower Miscellaneous Waste
G-46	Cluster 10-Water Tower Photographs
G-47	Cluster 11-BLDG 14 Plan And Elevations
G-48	Cluster 11-BLDG 14 Plan Miscellaneous Waste
G-49	Cluster 11-BLDG 14 Photographs
G-50	Cluster 12-Oil Tank Plan And Elevations
G-51	Cluster 12-Oil Tank Miscellaneous Waste
G-52	Cluster 12-Oil Tank Photographs
G-53	Site Utility Plan
G-54	Site Details 1
G-55	Site Details 2

7.2 Design Specifications

The technical specifications (bound separately) that are applicable to the demolition of the buildings on the Cornell-Dubilier property include the following:

DOCUMENTS 00 INTRODUCTORY, BIDDING, AND CONTRACT REQUIREMENTS BY USACE

00101 BID SCHEDULES 00102 LIST OF DRAWINGS

DIVISION 01 GENERAL REQUIREMENTS

01110 SUMMARY OF WORK



Page 7-4 Design Drawings



01140	WORK RESTRICTIONS
01201	PRE-CONSTRUCTION AND PRE-WORK CONFERENCES
01202	PROJECT PROGRESS MEETINGS
01270A	MEASUREMENT AND PAYMENT
01312A	QUALITY CONTROL SYSTEM (QCS)
01320	PROJECT SCHEDULE
01330	SUBMITTAL PROCEDURES
01351	SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST)
01356A	STORM WATER POLLUTION PREVENTION MEASURES
01380	PROJECT PHOTOGRAPHS
01381	VIDEOTAPING
01420	SOURCES FOR REFERENCE PUBLICATIONS
01450A	CHEMICAL DATA QUALITY CONTROL
01451A	CONTRACTOR QUALITY CONTROL
01500A	TEMPORARY CONSTRUCTION FACILITIES
01540	SECURITY
01550	SURVEYING
01580	PROJECT IDENTIFICATION
01700	REMEDIAL PACKAGE CLOSEOUT AND RECORD DOCUMENTS
DIVISION 02	SITE CONSTRUCTION
02212	HANDLING AND DISPOSAL OF DRUMMED AND HAZARDOUS
	MATERIALS
02220	DEMOLITION
02310	EXCAVATION
02320	BACKFILL AND COMPACTION
02350	TRANSPORTATION AND DISPOSAL
02373	GEOTEXTILE
02650	STORAGE TANK REMOVAL
02742	HOT MIX BITUMINOUS PAVEMENT
02821A	FENCING
DIVISION 03	Not Used
DIVISION 04	Not Used
DIVISION 05	Not Used
DIVISION 06	Not Used



Design Drawings Page 7-5

DIVISION 07 Not Used DIVISION 08 Not Used DIVISION 09 Not Used DIVISION 10 Not Used DIVISION 11 Not Used DIVISION 12 Not Used DIVISION 13 SPECIAL CONSTRUCTION 13280A ASBESTOS HAZARD CONTROL ACTIVITIES LEAD BASED PAINT AWARENESS 13281A REMOVAL AND DISPOSAL OF POLYCHLORINATED 13284 **BIPHENYLS (PCBs)** REMOVAL AND DISPOSAL OF PCB CONTAMINATED SOILS 13285 AND CONCRETE HANDLING OF LIGHTING BALLASTS AND LAMPS 13286 CONTAINING PCBs AND MERCURY

DIVISION 14 Not Used

DIVISION 15 Not Used

DIVISION 16 Not Used

Appendix A Data Summary Report OU2 - Building Demolition 95% Completion Phase

Appendix A
Quantity Takeoffs



Cornell-Dubiller Electronics Superfund Site OU-2 - Building Demolition 95% Completion Phase Quantity Take-Off Summary Sheet

Ŧ	1	-	1	T	<u> </u>	Т	Т	Τ	1	Т	1	Τ	Т	1	
		Genteratile (SE)	GR 181	R2 805	52 820	47 728	56 580	11.080	26.840	21 794	4 089	1.983	8.882	1,736	352,467
	Slab Restoration	Dense Graded Acorecate (Tons)		13.992	7.329	2.396	8008	1.999	4.140	11.683	743	486	1.143	419	63,401
		Bit. Surface Course (SY)	7,828	9.212	5,881	1,970	6.287	1,231	2,983	2,422	454	218	8963	193	39,641
MWARY		Excavation (Tons)	2,274	2,445	1,474	788	2,043	830	1,550	1,433	322	254	328	506	13,974
CHANTEY RUBINARY	Roofing	Materials (Tons)	422	534	329	85	441	N/A	NA	81	14	N/A	39	N/A	1,944
		i (Tons) Wood (Tons)	186	142	88	NA	118	NA	WA	13	6	N/A	40	N/A	296
		Steel (Tons)	32	14	6	1.5	49	28	66	22	N/A	23	N/A	24	331
		Glass (Tons) Concrete (Tons) Stee	3,148	3,495	1,714	1,207	2,274	487	882	3,105	175	27	264	38	16,826
	1	Glass (Tons)	35	15	7	*	20	¥N	Y/A	10	Ϋ́Α	N/A	N/A	WA.	۵
	Į	Ciluster Masonry (Tons)	986	1,377	619	419	889	N/A	Ϋ́Α	1,155	N/A	N/A	W.A	N/A	5,233
		Cluster	-	7	6	4	2	•	-	8	6	2	Ξ	2	Total

- 1. Assumed density of 1.6 tonslocy for mesotrry.
 2. Assumed density of 5 pet for glass.
 3. Assumed density of 5 pet for glass.
 4. Weight of light weight steel is 490 lbs/d
 5. Assumed density of 4 pet for wood roding.
 6. Assumed density of 15 pet for wood roding.
 7. Assumed density of 120 pof for soil.
 8. Assumed density of 140 pof for dense graded aggregate.

OU-2 - Building Demolition Quantity Take-Off

Cluster 1 95% Completion Phase

		OME	DIMENSIONS (FEET)	EET				
TYPE / LOCATION	Length	×	Width	×	Height	TOTAL QUANTITY	ANTITY	ASSUMPTIONS / REMARKS
BUILDING AREA Area (Building 1, 1A, 1B, 1C, & 1D)	263	*	2	*	W.	48 392	SF	
Area (Building 6)	66	×	51	×	¥ X	5,049	. R	
					Total:	53,441	SF	
KASONRY ⁽¹⁾ No see the second							\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
BUILDING 1, 1A, & 1D								Non-hazardous masonry quantities are included in Bid Schedule under the lump sum item for
Wall - PCB Contaminated < 500 ppm	245	×	-	×	22	290	Tons	Above Grade Structure Demoitton and Off Site Disposal. Hazardous masonry quantities are included under the unit price frem for Demoiftion. Handling / Stockolling. Sampling.
Wall - PCB Contaminated > 500 ppm	99	×	-	×	52	7	Tons	and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	361	Tons	
BUILDING 18 & 1C								Non-hazardous masonry quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Dismosel Hazardous masonry cuantities are
Wall - PCB Contaminated < 500 ppm	200	×	-	×	11	161	Tons	included under the unit price item for Demolition, Handling / Stockpiling, Sampling,
Wall - PCB Contaminated > 500 ppm	340	×	1	×	17	274	Tons	and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	435	Tons	

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OU-2 - Building Demolition

Quantity Take-Off Cluster 1

TYPE / LOCATION		DIME	DIMENSIONS (FEET)	EET)		TOTAL CLIANITY	7	
	Length	×	Width	×	Height			ASSOCIATIONS / REMARKS
BUILDING 6								Non-hazardous masonry quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site
Wail - PCB Contaminated < 500 ppm	110	×	-	×	20	401	Tons	Disposal. Hazardous masonry quantities are included under the unit price item for Demoittion, Handling / Stockpiling, Sampling,
Wall - PCB Contaminated > 500 ppm	100	×	1	×	20	95	Tons	and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	199	Tons	
Glass ⁽¹⁾ BulLDING 1, 1A, & 1D								
Well	308	×	¥ Ž	×	25	9.9	Tons	Glass quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
BUILDING 18 & 1C					Total:	4	Tons	
Wall	434	×	NA	×	17	3.7	Tons	Glass quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
					Total:	4	Tons	

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MAICOLM	CO	ell-Dubi	lier Electro	onics Sul	Cornell-Dubilier Electronics Superfund Site		
PIRNE		00-7	OU-2 - Building Demolition	g Demoli	ion		
			Quantity Take-Off	rake-Off			
			Cluster 1	9r 1			
		95	95% Completion Phase	tion Phas			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	E3)		VITTIN DITOT	
	Length	×	Width	×	Height		ASSOCIATIONS / REMARKS
BUILDING 18 & 1C - SAW TOOTH TRUSSES							
Glass (Building 1B & 1C) for 6 Trusses (80% Deducted for Wood and Roofing Materials)	202	*	N/A	×	1	25 Tons	Glass quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal.
9 PAILDING 6					Total:	25 Tons	5
Wall	249	×	N/A	×	50	2.5 Tons	Glass quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
					Total:	2 Tons	ø
SECTION OF A SECTI			1				
Roof Decking (Building 1, 1A, 1B, 1C, & 1D)	263	×		×	N/A	97 Tons	Wood quantities are included in
Roof Decking (Building 1B & 1C) for 6 Saw Tooth Trusses (20% Deducted for Glass)	202	×	4	×	N/A	80 Tons	under the fumb sum frem for Asbestos Abatement.
Roof Decking (Building 6)	66	×	51	×	N/A	10 Tons	1
					Total:	186 Tons	8



OU-2 - Building Demolition

Quantity Take-Off Cluster 1

		95,	Cluster 1 95% Completion Phase	er 1 itlon Pha	98			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	[]		VIII OILANTII		OVERANGE ON PROPERTY.
	Length	×	Width	×	Height			AGOUNT TONG! NEIMAKNO
ROOFING MATERIALS ⁽⁴⁾ Section 1987 Section				`' a	to the second second			
1, 1A, & 1D)	5	×	184		≤	98	Tons	Roofing Material quantities are included in Bid
Roofing Materials (Building 1B & 1C) for 6 Saw Tooth Trusses (20% Deducted for Glass)	202	×	14	×	N/A	298	Tons	Schedule under the lump sum item for Asbestos Abatement.
Roofing Materials (Building 6)	66	×	51	×	N/A	38	Tons	
					Total:	422	Tons	
STEEL FRAMING MEMBERS BUILDING 1, 14, & 1D	286		4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		A STATE OF THE STA			
15 Columns - W12 x 65 at 25' High	15	×	N/A	×	25	12	Tons	Assumed column weight of 65 pounds per foot.
Вевтs - W18 x 35	268	×	N/A	×	N/A	S.	Tons	Assumed beam weight of 35 pounds per foot.
BUILDING 18 & 1C					Total:	11	Tons	
12 Columns - W12 x 65 at 17' High	12	×	¥ N	×	17	~	Tons	Assumed column weight of 65 pounds per foot.
Beams - W18 x 35	404	×	N/A	×	NA	7	Tons	Assumed beam weight of 35 pounds per foot.
BUILDING 6			!		Total:	4	Tons	
1 Columns - W12 x 65 at 20' High	-	×	Υ/A	×	20	-	Tons	Assumed column weight of 65 pounds per foot.
Beams - W18 x 35	51	×	¥	×	N/A	₩.	Tons	Assumed beam weight of 35 pounds per foot.
					Total:	2	Tons	

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OU-2 - Building Demolition

Quantity Take-Off

		96	Clu Comp	Cluster 1 95% Completion Phase	88 6			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	FEET)		TOTAL OLIANITY	AUTHA	SAGEMENT OF STREET
	Length	×	Width	×	Height	יכושר מס		ASSOMETIONS I NEMANNS
Slab on Grade (Building 1, 1A, & 1D) - Non-Hazardous	11	×	184	×	0.51	539	Tons	
Slab on Grade (Building 1B & 1C) - Non-Hazardous	120	×	140	×	0.51	640	Tons	
Slab on Grade (Building 1B & 1C) - PCB Contaminated < 500 nom	90	×	180	×	0.51	617	Tons	Non-hazardous above grade concrete
Slab on Grade (Building 1B & 1C) - PCB Contaminated > 500 ppm	70	×	8	×	0.51	5	Tons	quantities are included in Bid Schedule under the lump sum item for Above Grade Structure
Siab on Grade (Building 6) - PCB Contaminated < 500 ppm	55	×	25	×	0.58	27	Tons	Demolition and Off Site Disposat. Hazardous above grade concrete quantities are included
Stab on Grade (Building 6) - PCB Contaminated > 500 ppm	45	×	75	×	0.58	146	Tons	under the unit price item for Demolition, Handling/Stockpiling, Sampling, and Off Site
Roof (Building 6) - Slab	68	×	51	×	-	374	Tons	Disposal of nazardous concrete and masonry.
Roof (Building 6) - 6 Beams (2' Deep x 1' Wide)	306	×	2	×	-	23	Tons	
					Total:	2,380	Tons	
Below Grade Concrete								
Footings (Standard Tee) - Non-Hazardous	105	×	Refer to As	Refer to Excavation Section on Assumptions Sheet	Section on heet	47	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	280	×	Refer to As	Refer to Excavation Section on Assumptions Sheet	Section on heet	124	Tons	Non-hazardous below grade concrete quantities
Footings (Standard Tee) - TSCA Waste > 500 ppm	22	×	Refer to As	Refer to Excavation Section on Assumptions Sheet	section on heet	32	Tons	sum item for Below Grade Structure Demolition and Off Site Disnosal Hazamonis below crade
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	455	×	Refer to As	Refer to Excavation Section on Assumptions Sheet	section on heet	202	Tons	concrete quantities are included under the unit price item for Demolition. Handling/Stockpiling.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	96	×	Refer to As	Refer to Excavation Section on Assumptions Sheet	Section on heet	268	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	207	×	Refer to As	Refer to Excavation Section on Assumptions Sheet	Section on heet	95	Tons	
					Total:	766	Tons	

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OU-2 - Building Demolition

Quantity Take-Off

Cluster 1 95% Completion Phase

NOTACO I SANT		Ž	DIMENSIONS (FEET)	EET)				
	Length	×	Width	×	Height	IOIAL GUANIIIT	ANIIIT	ASSUMPTIONS / REMARKS
SVANATURE CONTROL STATE OF THE								
Excavation for Footers - Non-Hazardous	105	×	Refer to E. Assu	Refer to Excavation Section on Assumptions Sheet	ection on eet	139	Tons	
Excavation for Footers - TSCA Wasta < 500 ppm	280	×	Refer to E	Refer to Excavation Section on Assumptions Sheet	ection on	370	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	72	×	Refer to E.	Refer to Excavation Section on Assumptions Sheet	ection on	92	Tons	Excavation quantities are included in Bid
Excavation for Footers - RCRA Waste - (Failing TCLP)	455	×	Refer to E	Refer to Excavation Section on	ection on	601	Tons	Schedule under unit price items for hazardous and non-hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	904	×	Refer to E.	Refer to Excavation Section on Assumptions Sheet	ection on	787	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	207	×	Refer to E.	Refer to Excavation Section on Assumptions Sheet	ection on eet	273	Tons	
					Total:	2,274	Toris	
SLAB RESTORATION (SLAB + 20 feet)								
3-inch Bituminous Surface Course (Bullding 1, 1A, 1B, 1C, & 1D)	283	×	204	×	A X	6,415	SΥ	See Assumptions Sheet for calculations.
3-inch Bituminous Surface Course (Building 6)	179	×	۲	×	¥X	1,412	λ	See Assumptions Sheet for calculations.
					Total:	7.828	λS	

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OU-2 - Building Demolition

Quantity Take-Off

Cluster 1 95% Completion Phase

TYPE / LOCATION			DIMENSIONS (FEET)	EET)	•	TOTAL OLIVER	Z.E.E.	ON CHARLES
	Length	×	Width	×	Height			ASSUMPTIONS / REMARKS
9-inch Dense Graded Aggregate Subbase (Building 1, 1A, 1B, 1C, & 1D) ⁽⁶⁾	283	×	204	×	0.75	6,122	Tons	See Assumptions Sheet for calculations
9-inch Dense Graded Aggregate Subbase (Building 6) ⁽⁶⁾	119	×	71	×	0.75	601	Tons	Coo Anomarijana Ohoda (ca calculation)
Additional Dense Graded Aggregate For Trench & Soll Removed From Sile ⁽⁶⁾	N/A	×	N/A	×	A/X	3,296	Tons	Equals volume for footers and soil removed from site.
					Total:	10,020	Tons	
Geotextile (Building 1, 1A, 1B, 1C, & 1D)	283	×	204	×	Y.	57,732	SF	
To Riming) piliyanga	2	×	5	×	Total:	8,449 66,181	SF	
Notes: 1. 20% deducted from total wall area for windows. Assumedd 1.30 tonalcy for 8 inch CMU w/ 1/3 voits and 0.3 tonalcy of britck for a total of 1.6 tonalcy for masonry and 5 pef for glass. 2. Assumedd density of 4 pef for wood noofing. 3. Assumedd density of 3 pef for 1 layer of asphalt shingles, assuming 5 layers, the total density is 15 pef for roofing materials. 4. Assumedd density of 2 tonalCY for concrete. 5. Assumedd density of 120 pcf for soil. 6. Assumedd density of 140 pcf for dense graded aggregate.			General Notes: 1. Unit quentities shown on this sprea excavation, bituminous surface coans geotexuite have been rounded up to the and Opinion of polynion See Prioring Best-Up Derivations (pro- See Prioring Best-Up Derivations (pro- further assumptions and clarifications.)	is shown on minous sur minous sur se been nound for Probable Coex-Lip Denin ptions and ck	General Notes: 1. Unit quantities shown on this spread sheet for below grade concrete, excavation, bituminous surface coares, dense graded aggregate, and geotextile have been rounded up to the nearest 10 on the Bid Schedule and Opinion of Probable Construction Cost for contingency purposes. See Prioring Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.	et for below gra- se graded aggr rest 10 on the t for contingency under separate	de concrete, egate, and ild Schedule purposes: cover) for	

OU-2 - Building Demolition

Quantity Take-Off Cluster 2

95% Completion Phase

TYPE / LOCATION		DIMENS	DIMENSIONS (FEET)		TOTAL CLIANTITY	ANTITY	0 8 8 8 8 8 8
	Length	×	Width	x Height			NEWANNO
BUILDING AREA							
	275	×	68	X NA	24,475	SF	
Area (Building 3/4 & 4A)	275	×	142	X/A	39,050	SF	
Area Between Buildings 2 & 3/4	100	×	30	X N/A	3,000	SF	
				Total:	66,525	SF	
MASONRY?		and the second					
Wall - PCB Contaminated < 500 ppm	1452	×	-	, x	1,377	Tons	Non-hazardous masonry quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous masonry quantities are included under the unit price item for Demolition, Handling / Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
				Total:	1,377	Tons	

Wall	1452	×	N/A	× 20	15	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
				Total:	15	Tons	

September 2006



OU-2 - Building Demolition

			Quantif	Quantity Take-Off	5 =			
			ฮี	Cluster 2				
		Ö	5% Com	95% Completion Phase	386			
TYPE / LOCATION		DIME	DIMENSIONS (FEET,	EET)		TOTAL CITANTITY	ANTITY	SASSAS
	Length	×	Width	×	Height	2010		KEMAKAS
BOOM				1.07				
(Building 2 & 2A)	275	×	68	1	AN N	6	Tons	
Roof Decking (Bullding 3/4 & 4A)	275	×	142	×	Ą	78	Tons	
Roof Decking (Building 3/4) Raised Portions	8	×	4	×	¥ X	2	Tons	Wood quantities included in Bid Schedule under
Roof Decking (Bullding 4A) Raised Portions	75	×	8	×	A/N	2	Tons	ure furily sufficient for Asbestos Abatement.
Roof Decking (Area Between Buildings 2 & 3/4)	100	×	99	×	N/A	9	Tons	
				!	Total:	142	Tons	
ROOFING MATERIALS ⁽³⁾			2					· 在一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
2 & 2A)	275		8	.; . ×	¥	<u>\$</u>	Tons	
Roofing Materials (Building 3/4 & 4A)	275	×	142	×	¥/Z	293	Tons	
Roofing Materials (Building 3/4) Raised Portions	8	×	4	×	Ą/X	18	Tons	Roofing Material quantities included in Bid
Roofing Materials (Building 4A) Raised Portions	75	×	8	×	Ą	11	Tons	Scriedule under the lump sum tiem for Aspestos Abatement.
Roofing Materials (Area Between Buildings 2 & 3/4)	100	×	8	×	Ą Z	23	Tons	
					Total:	534	Tons	
STEEL FRAMING MEMBERS	- 7, 1							
15 Columns - W12 x 65 at 20' High	ю	×	ΑN	×	20		Tons	Assumed column weight of 65 pouns per fo
Beams - W18 x 35	244	×	¥ N	×	A/A	4	Tons	Assumed beam weight of 35 pounds per foot.
					Total:	14	Tons	

OU-2 - Building Demolition

Quantity Take-Off Cluster 2

TYPE/IOCATION		DIME	DIMENSIONS (FEET)	E.		7074	7	
	Length	×	Width	×	Height	IOIAL GUANIIIT	ANIIIT	KEMARKS
				× × × × × × × × × × × × × × × × × × ×	1. A. J. Mary Paris, 1. J.		r T	Non-hazardous above grade concrete quantities
Slab on Grade (Building 2 & 2A) - Non-Hazardous	275	×	83	×	0.35	642	Tons	are included in Bid Schedule under the lump sum Item for Above Grade Structure Demolition
Slab on Grade (Building 3/4 & 4A) - Non-Hazardous	275	×	142	×	0.67	1,928	Tons	and Off Site Disposal. Hazardous above grade concrete quantities are included under the unit
Slab on Grade (Area Between Buildings 2 & 3/4) - Non- Hazardous	100	×	30	×	0.46	102	Tons	price item for Demolition, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
					Total:	2,672	Tons	
Below Grade Concrete								
Footings (Standard Tee) - Non-Hazardous	135	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ction on set	8	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	159	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ction on	2	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under the lumb
Footings (Standard Tee) - TSCA Waste > 500 ppm	288	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sect	action on set	261	Tons	sum item for Below Grade Structure Demolition and Off Site Disposal. Hazardous below grade
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	10	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	sction on	4	Tons	concrete quantities are included under the unit price item for Demolition, Handling/Stockolling.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	304	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	action on	135	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	929	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ection on	292	Tons	
					Total:	823	Tons	

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MALCOLM PIRNIE	Š	D O	Dubilier Electronics Superf OU-2 - Building Demolition Quantity Take-Off Cluster 2 95% Completion Phase	Comell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 2 95% Completion Phase	nd Site		
TYPE / LOCATION	Length	M ×	DIMENSIONS (FEET) Width	r) × Height	TOTAL	TOTAL QUANTITY	REMARKS
EXCAVATION (1:1 SIDE SLOPES) ⁹ Excavation for Footers - Non-Hazardous	135		Refer to Exca Assump	Refer to Excavation Section on Assumptions Sheet	\$ 2.5 S	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	159	×	Refer to Exca Assump	Refer to Excavation Section on Assumptions Sheet	210	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	588	×	Keter to Exca Assump	Refer to Excavation Section on Assumptions Sheet	776	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	10	×	Refer to Exca Assump	Refer to Excavation Section on Assumptions Sheet	13	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	304	×	Refer to Exca Assump	Refer to Excavation Section on Assumptions Sheet	401	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	656	×	Refer to Exca Assump	Refer to Excavation Section on Assumptions Sheet	998	Tons	
				Total:	2,445	Tons	
SLAB RESTORATION (SLAB + 20 feet)							
3-inch Bituminous Surface Course	295	×	281	× N/A	9,212	λS	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁶⁾	295	×	281	x 0.75	10,467	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁶⁾	W	×	ΑΝ	× N/A	3,526	Tons	Equals volume for footers and soil removed from site.
				Total:	13,992	Tons	

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OU-2 - Building Demolition

Quantity Take-Off Cluster 2

									_
TYPE/LOCATION			DIMENSIONS (FEET)	E1)		VTITMALIO IATOT		020	
	Length	×	Width	×	Height		-	KEMENKS	-
Geotextile Fabric	295	×	281	×	N/A	82,895	SF		
Nrtee									
1.20% deducted from total wall area for windows. Assumedd 1.30 tons/cy for 8 inch CMU w/ 1/3 voids and 0.3 tons/cy of brick for a total of 1.6 tons/cy for mesonry and 5 pef for glass.			1. Unit quantities excavation, bitun geotextile have be	shown on the ninous surfac seen rounded	is spread shee e coarse, dens up to the near	1. Unit quantities shown on this spread sheet for below grade concrete, excavation, bituminous surface coarse, dense graded aggregate, and geotextile have been rounded up to the nearest 10 on the Bid Schedule	oncrete, te, and schedule		· ·-· ·
 Assumedd density of 4 psf for wood roofing. Assumedd density of 3 psf for 1 layer of asphalt shingles, assuming 5 layers, the total density is 15 psf for roofing materials. 			and Opinion of Probable Construction See Pricing Back-Up Derivations (pro- further assumptions and clarifications.	Tobable Cons (-Up Derivations and clarif	kruction Cost is ons (provided i ications.	and Upinion of Probable Construction Cost for contrigency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.	poses.		
4. Assumedd deneity of 2 tons/CY for concrete.									-
5. Assumedd denaity of 120 pcf for soil.									
6. Assumedd density of 140 ocf for dense graded aggregate.									_

MAICOLM PIRNIE	_	Comell-E	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 3 95% Completion Phase	ubilier Electronics Supe U-2 - Building Demolitio Quantity Take-Off Cluster 3 95% Completion Phase	s Superfu molition -Off Phase	nd Site		
TYPE / LOCATION	Length	OIMEI ×	DIMENSIONS (FEET)	ET) ×	Height	TOTAL QUANTITY	ANTITY	REMARKS
BUILDING AREA Area	274	*	160		AN AN	43.840	PS.	
					Total:	43,840	P.S.	
MASONRY DESCRIPTION OF THE PROPERTY OF THE PRO								
Wall - PCB Contaminated < 500 ppm	370	×	-	×	15	263	Tons	Non-riazardous masonry quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous mesonry quantities are included under
Wall - PCB Contaminated > 500 ppm	200	×	-	×	15	356	Tons	the unit price item for Demolition, Handling / Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	619	Tons	
Wall	870	×	N/A	×	15	6.5	Tons	the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
					Total:	7	Tons	
Roof Decking	274	×	160	×	A/N	88	Tons	Wood quantities included in Bid Schedule under the lump sum item for Asbestos Abatement.
					Total:	88	Tons	

MAICOLM PIRNIE	-	Come!!-	Comell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 3 95% Completion Phase	ubilier Electronics Supe U-2 - Building Demolitio Quantity Take-Off Cluster 3 95% Completion Phase	s Superfu smolition -Off Phase	ind Site		
TYPE / LOCATION	Length	DIME	DIMENSIONS (FEET)	EET) ×	Height	TOTAL QUANTITY	JANTITY	REMARKS
ROOFING MATERIALS ⁽³⁾		7 × 1						
Roofing Materials	274	×	160	*	€ /Z	329	Tons	Roofing Material quantities included in Schedule under the lump sum item for Abatement.
		:			Total:	329	Tons	
STEEL FRAMING MEMBERS						•	* **.	
10 Columns - W12 x 65 at 20' High	9	×	₹	×	70	^	Tons	Assumed column weight of 65 pouns per foot.
Beams - W18 x 35	162	×	A/A	×	Y/N	က	Tons	Assumed beam weight of 35 pounds per foot.
					Total:	6	Tons	
CONCRETE®			: :	\$4 - 14 - 1 - 1		1		Non-hazardous above grade concrete quantities
Above Grade Concrete								are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous above crade
Slab on Grade - PCB Contaminated < 500 ppm	274	×	160	×	0.38	1,218	Tons	concrete quantities are included under the unit price item for Demolition, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
					Total:	1,218	Tons	

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MALCOLM	J	Someli	Cornell-Dubilier Electronics Superfund Site	nics Superfund	Site		
PIRZIE			OU-2 - Building Demolition	Demolition			
			Quantity Take-Off	ske-Off			
			Cluster 3	د			
			95% Completion Phase	on Phase			
TYPE / LOCATION		MIG	DIMENSIONS (FEET)	_	TOTAL OLIANTITY	YTITA	0
	Length	×	Width	Height	2010		KEMAKKS
Below Grade Concrete							
Footings (Standard Tee) - Non-Hazardous	180	×	Refer to Excavation Section on Assumptions Sheet	n Section on Sheet	8	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	211	×	Refer to Excavation Section on Assumptions Sheet	n Section on s Sheet	25	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under the furni sum
Footings (Standard Tee) - TSCA Waste > 500 ppm	380	×	Refer to Excavation Section on Assumptions Sheet	n Section on Sheet	169	Tons	item for Below Grade Structure Demolition and Off
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	22	×	Refer to Excavation Section on	n Section on	5	Tons	quantities are included under the unit price item for Demolities Demolities are included under the unit price item
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	324	×	Refer to Excavation Section on Assumptions Sheet	n Section on Scheet	1	Tons	and Off Site Disposal of Hazardous Concrete and Masonry
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	0	Tons	
				Total:	496	Tons	
EXCAVATION (1:1 SIDE SLOPES)(9)				*			
Excavation for Footers - Non-Hazardous	180	×	Refer to Excavation Section on Assumptions Sheet		238	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	211	×	Refer to Excavation Sectlon on Assumptions Sheet	on Section on s Sheet	279	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	380	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	502	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	22	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	29	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	324	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	428	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	0	Tons	
				Total:	1,474	Tons	

OU-2 - Building Demolition

Quantity Take-Off Cluster 3

TYPE / LOCATION		DIME	DIMENSIONS (FEET)	EET)		TOTAL	A Print	
	Length	×	Width	×	Height	IOIAL GUANIIIT	ANIIIT	KEMARKS
SLAB RESTORATION (SLAB + 20 feet) 3-Inch Bituminous Surface Course 294 x	294	×	180 ×	×	N/A	5,881	11 SY	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁶⁾	29	×	180	×	0.75	5,279	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soll Removed From Site ⁽⁶⁾	N/A	×	A/N	×	Y/Z	2,051	Tons	Equals volume for footers and soil removed from site.
				 	Total:	7,329	Tons	
Geotextile Fabric	294	×	180	×	ΑN	52,920	SF	
Notes: 1. 20% deducted from total wall area for windows. Assumedd 1.30 tons/cy for 8 inch CMU w/ 1/3 voids and 0.3 tons/cy of brick for a total of 1.8 tons/cy for masorny and 5 psf for glass. 2. Assumedd density of 4 psf for wood roofing. 3. Assumedd density of 3 psf for 1 layer of asphalt shingles, assuming 5 layers, the total density is 15 psf for roofing materials. 4. Assumedd density of 2 tons/CY for concrete. 5. Assumedd density of 120 pcf for soil. 6. Assumedd density of 140 pcf for dense graded aggregate.			General Notes: 1. Unit quantities shown on this spreas excavation, bituminous surface coars geotextile have been rounded up to thand Opinion of Probable Construction See Pricing Back-Up Derivations (profurther assumptions and clarifications.	s shown on to minder surface to the control of the	nis spread shee ce coarse, dens d up to the rear situction Cost f tions (provided iffcetions.	General Notes; 1. Unit quantities shown on this spread sheet for betow grade concrete, excavation, biturninous surface coarse, dense graded eggregate, and geotextitle have been rounded up to the nearest 10 on the Bid Schedula and Opinion of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.	o concrete, gate, and 1 Schedule urposes. cover) for	

MAICOLM	Com	Cornell-Dubilier Electronics Superfund Site	ronics Superf	und Site	
PRNE		OU-2 - Buildi Quantity	OU-2 - Building Demolition Quantity Take-Off		
		Clus 95% Comp	Cluster 4 95% Completion Phase		
TYPE/LOCATION	_	DIMENSIONS (FEET)		STATISTICS ATOM	
	Length x	Width	t Height	IOIAL GUANIIIY	REMARKS
BUILDING AREA Area	257 ×	44 ×	r N/A	11,308 SF	
			Total:	11,308 SF	
MASONRY(I)					Non-hazardous masonry quantities are
Wall - Non-Hazardous	602 ×	-	r 14.67	419 Tons	included in Bid Schedule under the lump sumitem for Above Grade Structure Demolition and Off Site Disposal. Hazardous masonry quantities are included under the unit price item for Demolition, Handling / Stockpiling, Sampling, and Off Site Disposal of Hazardous
	:		Total:	419 Tons	Concrete and Masonry. 20% deducted for windows see note 1.
					1447 41111
Wall	602 ×	X X	(14.67	4 Tons	Grass quantities included in bid Scriedule under the lump sum item for Above Grade Structure Demolition and Off Site. 80% deducted for masonry see note 1.
			Total:	4 Tons	



OU-2 - Building Demolition

Quantity Take-Off

Cluster 4 95% Completion Phase

TYPE / LOCATION		DIME	DIMENSIONS (FEET)	jj.		101		
	Length	×	Width	×	Height	IOIAL GUANIIIT	ANII A	REMARKS
ROOFING MATERIALS"								
Roofing Materials	257	×	4	*	N/A	85	Tons	Rooning Materials quantities included in Bid Schedule under the lump sum item for Asbestos Abatement.
					Total:	82	Tons	
STEEL FRAMING MEMBERS								
3 Columns - HSS6 x 6 x 1/2 at 14.67' High	ო	×	V	×	14.67	0.9	Tons	Tons Assumed column weight of 42 pouns per foot.
Beams - W8 x 24	44	×	A/N	×	A/S	0.5	Tons	Assumed beam weight of 24 pounds per foot.
					Total:	1.5	Tons	

MALCOLM PIRNIE		Cornell	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 4	lier Electronics Su ? - Building Demol Quantity Take-Off Cluster 4	Dubilier Electronics Superfu OU-2 - Building Demolition Quantity Take-Off Cluster 4	and Site		
			95% C	95% Completion Phase	n Phase			
TYPE / LOCATION	Length	DIME	DIMENSIONS (FEET)	EET) ×	Height	TOTAL QUANTITY	ANTITY	REMARKS
CONCRETE(3)								一年 一
Above Grade Concrete								Non-hazardous above grade concrete quantities are included in Bid Schedule under the lump sum item for Above Grade Structure
Slab on Grade - Non-Hazardous	257	×	4	×	0.63	524	Tons	Demolition and Off Site Disposal. Hazardous above grade concrete quantities are included
Roof	257	×	44	×	0.5	419	Tons	under the unit price item for Demolition, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and
					Total:	942	Tons	
Below Grade Concrete								
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to E	Refer to Excavation Section on Assumptions Sheet	ection on	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	29	×	Refer to E Assu	Refer to Excavation Section on Assumptions Sheet	ection on	8	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Footings (Standard Tee) - TSCA Waste > 500 ppm	569	×	Refer to E	Refer to Excavation Section on Assumptions Sheet	ection on	120	Tons	the lump sum item for Below Grade Structure Demolition and Off Site Disposal. Hazardous
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to E Assu	Refer to Excavation Section on Assumptions Sheet	ection on leet	0	Tons	below grade concrete quantities are included under the unit price item for Demolition.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	120	×	Refer to E Assu	Refer to Excavation Section on Assumptions Sheet	ection on leet	53	Tons	Handiling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	140	×	Refer to E	Refer to Excavation Section on Assumptions Sheet	ection on leet	62	Tons	Masonry.
					Total:	265	Tons	



OU-2 - Building Demolition

Quantity Take-Off

Cluster 4 95% Completion Phase

NCF 4CC - udx+		DIME	DIMENSIONS (FEET)	ET)	_			
	Length	×	Width	×	Height	I O I AL GUANTII Y	ANIIIY	REMARKS
EXCAVATION (1:1 SIDE SLOPESI [®])								
Excavation for Footers - Non-Hazardous	0	×	Refer to Ex	Refer to Excavation Section on Assumptions Sheet	ction on	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	29	×	Refer to Ex	Refer to Excavation Section on Assumptions Sheet	ction on et	88	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	269	×	Refer to Ex Assur	Refer to Excavation Section on Assumptions Sheet	ction on et	355	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Ex Assur	Refer to Excavation Section on Assumptions Sheet	ction on et	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	120	×	Refer to Ex Assur	Refer to Excavation Section on Assumptions Sheet	ction on et	158	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	140	×	Refer to Ex Assur	Refer to Excavation Section on Assumptions Sheet	ction on et	185	Tons	
					Total:	786	Tons	
SLAB RESTORATION (SLAB + 20 feet) 3-inch Bituminous Surface Course	277	**************************************	. 23	, (i) (ii) (iii) (W/N	1,970		See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁵⁾	712	×	2	×	0.75	1,229	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site (5)	V N	×	N N	×	N/A	1,167	Tons	Equals volume for footers and soil removed from site.
					Total:	2,396	Tons	

MALCOLM PIRNIE
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OU-2 - Building Demolition

Quantity Take-Off

Cluster 4 95% Completion Phase

					•			-
TYPE / LOCATION	Length	DIME	DIMENSIONS (FEET)	× EE)	Height	TOTAL QUANTITY	REMARKS	
Geotextile Fabric	277	×	22	×	ΑΆ	17,728 SF		
Notes: 1. 20% deducted from total wall area for windows. Assumedd 1.30 tonsfcy for 8 inch CMU w/ 1/3 voids and 0.3 tons/cy of brick for a total of 1.6 tons/cy for masonry and 5 psf for glass. 2. Assumedd density of 3 psf for 1 layer of asphalt shingles, assuming 5 layers, the total density is 15 psf for roofing materials. 3. Assumedd density of 2 tons/CY for concrete.			General Notes: 1. Unit quantities shown on this spread excavation, bituminous surface coerse geotextile have been rounded up to the and Opinion of Probable Construction See Pricing Back-Up Derivations (profurther assumptions and clarifications.	i shown on thi minous surface ween rounded robable Cons k-Up Derivatii ons and clarif	s spread shee a coerse, den up to the near truction Cost I ons (provided cetions.	General Notes: 1. Unit quantities shown on this spread sheet for below grade concrete, excavation, briuminous surface coerse, dense graded aggregate, and geotevatide have been rounded up to the nearest 10 on the Bid Schedule and Opinion of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.		
4. Assumedd density of 120 pcf for soil.								_
5. Assumedd density of 140 pcf for dense graded								_



OU-2 - Building Demolition

Quantity Take-Off Cluster 5

TYPE / LOCATION		DIME	DIMENSIONS (FEET)	ET)		VTITALIO IATOT	VIII	
	Length	×	Width	×	Height	101AL 40	AN 1111	REMARKS
SULLDING AREA								
)							
עיפע (סתווחוול) מי אלי ע מס)	5	×	2 <u>8</u>	×	¥ Z	37,185	RS.	
Area (Building 9C)	55	×	35	×	Ϋ́	1,925	Ŗ	
Area (Building 17)	20	×	8	×	Ϋ́	400	SF	
			\$		Total:	39,510	SF	
MASONRY®								
	Control Control			A SAMPTIME AND CO.				Non-hazardous masonry quantities are
BUILDING 9, 9A, 9B, 9C								included in Bid Schedule under the lump sum them for Above Grade Structure Demolition
								and Off Site Disposal. Hazardous masonry
Wall - Non-Hazardous	240	×	-	×	5	171	Tons	quantities are included under the unit price
								Rem for Demointon, Handling / Stockpilling, Sampling, and Off Site Disposal of Hazardous
Wall - PCB Contaminated < 500 ppm	700	×	-	×	15	498	Tons	Concrete and Masonry. 20% deducted for
					Total:	899	Tons	Windows see note 1.
								Non-hazardous masonry quantities are
BUILDING 17								item for Above Grade Structure Demolition
								and Off Site Disposal. Hazardous masonry
								quantities are included under the unit price
								item for Demolition, Handling / Stockpiling,
Wall - PCB Contaminated < 500 ppm	&	×	-	×	र्ट	22	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for
					Total:	75	Tons	Wildows see note 1.
						5	5	

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MALCOLM PIRNIE	ပိ		Cornell-Dubilier Electronics Superfund Site OU-2 - Bullding Demolition Quantity Take-Off Cluster 5 95% Completion Phase	lier Electronics Su : - Bullding Demol Quantity Take-Off Cluster 5 % Completion Pha	Superfun Iolition Af hase	d Site		
TYPE / LOCATION	Length		DIMENSIONS (FEET) Width	ET) ×	Height	TOTAL QUANTITY	ANTITY	REMARKS
Glass ⁽¹⁾ BUILDING 9, 9A, 9B, 9C		**** *** ***						
Wall	952	×	N/A	×	5	۲	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
Saw Tooth Trusses					Total:	7	Tons	
Glass for 3 Trusses (80% Deducted for Wood and Roofing Materials)	201	×	N/A	×	40	12	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for Wood and Roofing Materials.
BUILDING 17					Total:	12	Tons	
North Wall	80	×	Ϋ́Z	×	5	0.60	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
					Total:	τ-	Tons	

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MALCOLM	O	ornell-D	Cornell-Dubilier Electronics Superfund Site	ctronics	Superfun	d Site		
		J	OC-2 - Building Demolition Quantity Take-Off	Cuantity Take-Off	Hotilion Off			
			Cluster 5 95% Completion Phase	Cluster 5 mpletion F	hase			
TYPE / LOCATION	,	DIME	DIMENSIONS (FEET)	EET)		TOTAL QUANTITY	JANTITY	REMARKS
	Length	×	Width	×	Height			
A STATE OF THE PROPERTY OF THE	<u> </u>			1.0				
Roof Decking (Building 9, 9A, & 9B)		×	185	×	N/A	74	Tons	
Roof Decking (Building 9C)	22	×	35	×	A/A	4	Tons	Wood quantities included in Bid Schedule under the lump sum item for Asbestos
Roof Decking for 3 Saw Tooth Trusses (20% Deducted for Glass)	201	×	40	×	N/A	39	Tons	Abatement.
Roof Decking (Building 17)	20	×	20	×	₹ Z	-	Tons	
9 9 9 9 9					Total:	118	Tons	
ROOFING MATERIALS ⁽³⁾					1			
Roofing Materials (Building 9, 9A, & 9B)	201	×	185	×	A/N	279	Tons	
Roofing Materials (Building 9C)	22	×	35	×	N/A	4	Tons	Roofing Material guantities included in Bid
Roofing Materials for 3 Saw Tooth Trusses (20% Deducted for Glass)	201	×	9	×	N/A	145	Tons	Schedule under the lump sum item for Asbestos Abatement.
Roofing Materials (Building 17)	20	×	8	×	N/A	ო	Tons	
		į			Total:	144	Tons	
STEEL FRAMING MEMBERS								
40 Columns - W12 x 85 at 15' High	5	×	Ϋ́Z	×	5	20	Tońs	Assume column weight of 65 pouns per foot.
Beams - W18 x 35	1665	×	۷ ۲	×	N/A	59	Tons	Assume beam weight of 35 pounds per foot.
					Total:	49	Tons	

Cornell-Dubilier Electronics Superfund Site OU-2 Building Demolition Middlesex County, New Jersey

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MICONW	ຮ	O-llem	Comell-Dubilier Electronics Superfund Site	ctronics S	Superfund	Site		
		5	OU-2 - Building Demolition	ding Demo	olition			
			Quant	Quantity Take-Off	#			
			ธิ	Cluster 5				
			95% Completion Phase	pletion Pł	1286			
TYPE / LOCATION	Length	i ×	DIMENSIONS (FEET)	ET) ×	Height —	TOTAL QUANTITY	ANTITY	REMARKS
CONCRETE(Concrete								Non-hazardnie abwa grada woordd
Slab on Grade (Building 9, 9A, 9B, & 9C) - Non-Hazardous	169	×	175	×	0.56	1,217	Tons	quantities are included in Bid Schedule under the fump sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous
Slab on Grade (Building 9, 9A, 9B, & 9C) - PCB Contaminated < 500 ppm	16	×	82	×	0.56	356	Tons	above grade concrete quantities are included under the unit price item for Demolition.
Slab on Grade (Building 17)	20	×	20	×	0.46	1	Tons	Disposal of Hazardous Concrete and Masonry.
					Total:	1,586	Tons	
Below Grade Concrete Buil DING 9.9A.9B.9C								
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Ex Assur	Refer to Excavation Section on Assumptions Sheet	ction on	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	293	×	Refer to Ex Assu	Refer to Excavation Section on Assumptions Sheet	ction on	130	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Footings (Standard Tee) - TSCA Waste > 500 ppm	599	×	Refer to Ex	Refer to Excavation Section on Assumptions Sheet	ction on	266	Tons	the lump sum frem for Below Grade Structure Demolition and Off Site Disposal, Hazardous
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to Ex	Refer to Excavation Section on Assumptions Sheet	ction on	0	Tons	below grade concrete quantities are included under the unit price item for Demolition,
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	167	×	Refer to Ex Assu	Refer to Excavation Section on Assumptions Sheet	ction on	74	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	409	×	Refer to Ex	Refer to Excavation Section on Assumptions Sheet	ction on let	182	Tons	Masonry.
					Total:	652	Tons	



OU-2 - Bullding Demolition

Quantity Take-Off Cluster 5

95% Completion Phase

TYPE / LOCATION		DIME	DIMENSIONS (FEET)			VIII O INTOI	VTITA	
	Length	×	Width	x Height) 1		KEMAKAS
BUILDING 17								
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	8	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	36	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Footings (Standard Tee) - TSCA Waste > 500 ppm	0	×	Refer to Excavation Section on	to Excavation Section	5	0	Tons	the lump sum item for Below Grade Structure Demolition and Off Site Disposal, Hazardous
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section	5	0	Tons	below grade concrete quantities are included under the unit price item for Demolition,
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	0	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	0	Tons	Masonry.
				7	Total:	36	Tons	
EXCAVATION (1:1 SIDE SLOPES) ⁽⁹⁾ SE BUILDING 9, 98, 98, 90								
Excavation for Footers - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	293	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	387	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	299	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	6	791	Tons	Excavation quantities included in Bid
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	0	Tons	Schedule under unit price Items for hazardous and non-hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	167	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	220	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	409	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	5	540	Tons	
				1	Total:	1,938	Toris	

Cornell-Dubiller Electronics Superfund Site OU-2 Building Demolition Middlesex County, New Jersey

MALCOLM	Ŏ	orneil-D	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off	ier Electronics Su : - Bullding Demol Quantity Take-Off	perfund (ition	oite Site		
			Cluster 5 95% Completion Phase	Cluster 5 ompletion Pha	150			
TYPE / LOCATION			DIMENSIONS (FEET)	Æ	<u> </u>	TOTAL QUANTITY	ANTIITY	REMARKS
BUILDING 17	Length	×	Width	×	Height			
Excavation for Footers - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ion on	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	80	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Section Section Sheet	ion on	106	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ion on	0	Tons	Excavation quantities included in Bid
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Section Section Sheet	ion on	0	Tons	Schedule under unit price items for hazardous and non-hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	ion on t	0	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ion on t	0	Tons	
					Total:	106	Tons	
SLAB RESTORATION (SLAB + 20 feet)								
3-inch Bituminous Surface Course	276	×	205	×	¥N V	6,287	S⊀	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁶⁾	276	×	205	×	0.75	6,015	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁶⁾	N/A	×	N/A	×	N/A	3,034	Tons	Equals volume for footers and soil removed from site.
					Total:	9,049	Tons	

MALCOLM PIRNIE
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OU-2 - Building Demolition

Quantity Take-Off

95% Completion Phase

Cluster 5

DIMENSIONS (FEET)	Width x Height Clar Goan III	205 x N/A 56,580 SF	General Notes: 1. Unit quentities shown on this spread sheet for below grade concrete, excavation, bituminous surface coarse, dense graded aggregate, and geolexile have been rounded up to the nearest 10 on the Bid Schedule
MIG	×	×	
	Length	276	
TYPE/LOCATION		Geotextile Fabric	Notes: 1. 20% deducted from total wall area for windows. Assumed 1.30 tonstcy for 8 inch CMU w/ 1/3 voids and 0.3 tonstcy of brick for a total of 1.6 tonstcy for masonry and 5 psf for glass.

- Assumed density of 4 psf for wood roofing.
- Assumed density of 3 paf for 1 layer of asphalt shingles, sauming 5 layers, the total density is 15 pef for roofing naterials.
- Assumed density of 2 tons/CY for concrete.
- 5. Assumed density of 120 pcf for soil.
- 8. Assumed density of 140 pcf for dense graded aggregate.

and Uprinon or Probable Construction Cost for conflingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.

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MAICOLM	O	ornell-D	ubilier Ele	ctronics	Cornell-Dubilier Electronics Superfund Site	d Site		
PIRNE		0	OU-2 - Building Demolition	ding Den	nolition			
			Quant	Quantity Take-Off	₽ #.			
			5	Cluster 6				
			95% Соп	95% Completion Phase	hase			
TYPE / LOCATION	-	DIME	DIMENSIONS (FEET)	(ET)		TOTAL QUANTITY	ANTITY	REMARKS
	Cellgill	<	AVIGI	×	Heignt			
BUILDING AREA		\$ 13 135 201	\$130 \$130 \$250 \$250 \$250 \$250			٠ 		
And the second	18	~ % *	20	T X	NA	်က	R	
Area (Building 10A)	40	×	8	×	ΑX	800	R	
					Total:	6,000	R	
STEEL - SIDING(1)						**.* **.*		
Wall - PCB Contaminated < 500 ppm	308	×	1/8	×	=	o	Tons	Steel quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal.
BUILDING 10A					Total:	6	Tons	
Wall - Non-Hazardous	120	×	1/8	×	10	က	Tons	Steel quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal.
					Total:	က	Tons	
STEEL , ROOFINGII								
Roofing (Building 10) - Non-Hazardous	104	×	20	×	3/8	40	Tons	Steel quantities included in Bid Schedule under
Roofing (Building 10A) - Non-Hazardous	40	×	20	×	3/8	80	Tons	the fump sum item for Above Grade Structure Demolition and Off Site Disposal.
					Total:	46	Tons	



OU-2 - Building Demolition

Quantity Take-Off

Cluster 6 95% Completion Phase

TYPE / LOCATION	to a	DIME ,	DIMENSIONS (FEET)	E ,		TOTAL QUANTITY	IANTITY	REMARKS
	Lengui	\ 	ANGE	×	Height			
STEEL FRAMING MEMBERS						6.1 120 75		
No Information Available	N/A	×	N/A	×	N/A		Tons	
CONCRETE®					.3			
Above Grade Concrete								Non-hazardous above grade concrete quantities are included in Bid Schedule under the lump
Slab on Grade (Building 10) - Non-Hazardous	104	×	99	×	0.5	193	Tons	sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous above grade concrete quantities are included under the unit
Slab on Grade (Building 10A) - Non-Hazardous	40	×	50	×	0.5	15	⋩	price item for Demolition, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
					Total:	207	Tons	
Below Grade Concrete								
BUILDING 10								
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ection on ret	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ection on ret	0	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under the lumo
Footings (Standard Tee) - TSCA Waste > 500 ppm	440	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ction on	196	Tons	sum item for Below Grade Structure Demolition and Off Site Disposal, Hazandous below grade
Footings (Standard Tee) - RCRA Waste - (Falling TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	action on	0	Tons	concrete quantities are included under the unit price item for Demolition, Handling/Stockpiling.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	oction on	0	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	30	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sect Assumptions Sheel	action on set	13	Tons	
					Total:	209	Tons	

Cornell-Dubilier Electronics Superfund Site OU-2 Building Demolition Middlesex County, New Jersey

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PIRNE		_	OU-2 - Building Demolition	ling De	molition			
			Quantity Take-Off	y Take	-O#			-
			ਨੂੰ	Cluster 6				
			95% Completion Phase	pletion	Phase			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	E	<u> </u>	TOTAL QUANTITY	ANTITY	REMARKS
100 000 H	Length	×	Width	×	Height			
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Excavation Section on	avation S	ection on	o	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	0	×	Assumptions Sneet Refer to Excavation Section on	Assumptions Sneet to Excavation Secti	neet ection on	. 0	Tons	Non-hazardous below grade concrete quantities
Footings (Standard Tee) - TSCA Waste > 500 ppm	99	×	Refer to Excavation Section on	Assumptions Sneet to Excavation Section	leet lection on	29	Tons	are included in Bid Schedule under the lump sum item for Below Grade Structure Demolition
Footings (Standard Tee) - RCRA Waste - (Failing TC! P)	0	×	Refer to Excavation Section on	to Excavation Section	ection on	0	Tons	and Office Disposal. Hazardous below grade concrete quantities are included under the unit
Footing (Standard Tee) - Both TSCA/RCRA (TSCA < 500 nom)	32	×	Refer to Excavation Section on	to Excavation Section	ection on	4	Tons	Sampling, and Off Site Disposal of Hazardous
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	19	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sections Sheet	eet ection on eet	27	Tons	Concrete and masonry.
					Total:	11	Tons	
EXCAVATION (1:1 SIDE SLOPES/9) BUILDING 10						A Company of the Comp		
Excavation for Footers - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	section on neet	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Section Section Assumptions Sheet	Section on seet	0	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	044	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sective Assumptions Sheet	Section on	581	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ection on	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ection on	0	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	30	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	section on neet	40	Tons	



OU-2 - Building Demolition

Quantity Take-Off Cluster 6

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TYPE / LOCATION			DIMENSIONS (FEET)		VIII O I ATOT	ANTITA	0 570 a a a a
	Length	×	Width	Height	20101		KEMAKNO
			-	Total:	620	Tons	
BUILDING 10A							
Excavation for Footers - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	Section on sheet	0	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	99	×	Refer to Excavation Section on Assumptions Sheet	Section on sheet	87	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	33	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	42	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	61	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	81	Tons	
				Total:	210	Tons	
SLAB RESTORATION (SLAB + 20 feet)			A control of the cont				
3-inch BitumInous Surface Course (Building 10)	124	×	70 ×	Ν	962	S⊀	leet for calculations.
3-inch Bituminous Surface Course (Building 10A)	99	×	40 x	N/A	267	SY	See Assumptions Sheet for calculations.
		i 		Total:	1,231	λS	

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OU-2 - Building Demolition

Quantity Take-Off Cluster 6

				į	_			
TYPE / LOCATION	4		DIMENSIONS (FEET)	ET)	:	TOTAL QUANTITY	Ţ	REMARKS
	Lengin	×	uldia	×	Heignt		1	
9-inch Dense Graded Subbase Aggregate ⁽⁴⁾ (Building 10)	124	×	02	×	0.75	615	Tons	
9-inch Dense Graded Subbase Aggregate ⁽⁴⁾ (Building 10A)	09	×	40	×	0.75	151	Tons	See Assumptions Sheet for calculations
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁴⁾	N/A	×	N/A	×	N/A	1,233	Tons	Equals volume for footers and soil removed from site.
					Total:	1,999	Tons	
Geotextile Fabric (Building 10)	124	×	2 9	×	N/A	8,680	n r	
Geolexille Fabric (building 10A)	8	×	04	×	Total:	11,080	n R	
Notes: 1. Weight of light weight steel is 490 lbs/cf			General Notes: 1. Unit quantitie	sshown on t	his spread sheat	Seneral Notes: I. Unit quantities shown on this spread sheet for below grade concrete.	oncrete,	
2. Assumedd density of 2 tons/CY for concrete.			geotextile have	minous sure been rounde	d up to the neers	excavation, ciruminous surrace coarse, censes graded algoregate, and geotextile have been rounded up to the neerest 10 on the Bid Schedule	e, and Schedule	
3. Assumedd density of 120 pcf for soil.			and Opinion of See Pricing Bay	Probable Conck-Up Deriva	nstruction Cost to itions (provided u	and Opinion of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for	poses.	
4. Assumedd density of 140 pcf for dense graded aggregate.			further assumptions and clarifications.	tions and cler	ifications.			

MALCOLM PIRNIE	ပိ	mell-Dub	Dubilier Electronics Superf OU-2 - Building Demolition	tronics ing Den	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition	d Site	•	
			Quantity Take-Off Cluster 7	ntity Take-(Cluster 7	#			
		6	95% Completion Phase	letion P	hase			
TYPE / LOCATION	Length	DIMENS	DIMENSIONS (FEET)	E ×	Height	TOTAL QUANTITY	ANTITY	REMARKS
BUILDING Ares Area (Building 11) Area (Building 12)	200 200	× × 40	40 40	* *	N/A N/A	8,000 SF 8,000 SF	SF SF	
					Total:	16,000	SF	
STEEL - SIDING _N		Services						
Wall - Non-Hazardous	480	×	1/8	×	20.33	25	Tons	Steel quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal.
BUILDING 12					Total:	25	Tons	
Wall - PCB Contaminated < 500 ppm	240	×	1/8	×	20.33	12	Tons	Steel quantities included in Bid Schedule under
Wall - PCB Contaminated > 500 ppm	240	×	1/8	×	20.33	12	Tons	ing fully sum tent for Audya Grada Structure Demolition and Off Sita Disposal.
				,	Total:	25	Tons	

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MAICOIM	క	rnell-D	ubilier Ek	Cornell-Dubilier Electronics Superfund Site	Superfur	d Site		
PIRNIE		O	.U-2 - Bui	OU-2 - Building Demolition	olition			
			Quant	Quantity Take-Off)#			
			ပ	Cluster 7				
			95% Con	95% Completion Phase	hase			
TYPE/LOCATION		DIME	DIMENSIONS (FEET)	EET)		TOTAL CHANTITY	IANTITY	0 0 0 0 0 0 0
	Length	×	Width	×	Height			
STEEL + FRAMING MEMBERS ⁽²⁾							ر ایک این انتخاب این انتخاب	
	200	×	¥,¥	*	20.33	24	Tons	Steel quantities included in Bid Schedule under
Building 12	200	×	¥	×	20.33	24	Tons	the lump sum item for Above Grade Structure Demolition and Off Site Disposal.
					Total:	49	Tons	
CONCRETE						**		
Above Grade Concrete								Non-hazardous above grade concrete
Slab on Grade (Building 11) - Non-Hazardous	200	×	40	×	0.33	8	Tons	dualitudes are included in bid Schedule under the lump sum item for Above Grade Structure
Stab on Grade (Building 12) - PCB Contaminated < 500 ppm	100	×	9	×	0.29	98	Tons	Definition and Oil Site Disposal. hazardous above grade concrete quantities are included under the unit price item for Demolition.
Slab on Grade (Building 12) - PCB Contaminated > 500 ppm	100	×	40	×	0.29	88	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Below Grade Concrete					Total:	370	Tons	
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to E	Refer to Excavation Section on Assumptions Sheet	ection on	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	253	×	Refer to F	Refer to Excavation Section on Assumptions Sheet	ection on	112	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Footings (Standard Tee) - TSCA Waste > 500 ppm	0	×	Refer to B	Refer to Excavation Section on Assumptions Sheet	ection on	0	Tons	the lump sum Item for Below Grade Structure Demoittion and Off Site Disposal. Hazardous
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to 6	Refer to Excavation Section on Assumptions Sheet	ection on	0	Tons	below grade concrete quantities are included under the unit price item for Demolition,
Footings (Standard Tee) - Both TSCARCRA (TSCA < 500 ppm)	329	×	Refer to 6	Refer to Excavation Section on Assumptions Sheet	ection on seet	146	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to I	Refer to Excavation Section on Assumptions Sheet	ection on leet	0	Toms	
					Total:	259	Tons	

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OU-2 - Building Demolition

Quantity Take-Off

Cluster 7

			95% Completion Phase			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	TOTAL GUANTITY	VIIIV	DELLADE
	Length	×	Width x Height			
BUILDING 12						
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	352	· ×	Refer to Excavation Section on Assumptions Sheet	156	Tons	Non-hazardous below grade concrete
Footings (Standard Tee) - TSCA Waste > 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	the lump sum item for Below Grade Structure Demolition and Off Site Disposed Hoverdough
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	below grade concrete quantities are included under the unit price item for Demolition
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	240	×	Refer to Excavation Section on Assumptions Sheet	107	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masoncy
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	
	1		Total:	263	Tons	
EXCAVATION (1.1 SIDE SLOPES) ⁽⁶⁾ BUILDING 11	44. 14.4 14.4 14.4					
Excavation for Footers - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	253	×	Refer to Excavation Section on Assumptions Sheet	334	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Falling TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	329	×	Refer to Excavation Section on Assumptions Sheet	434	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	0	Tons	
			Total:	768	Tons	

MALCOLM	3	ornell-D	Cornell-Dubilier Electronics Superfund Site	ctronics	Superfun	d Site		
PIRNE		J	OU-2 - Building Demolition	ding Der	nolition			
			Quant	Quantity Take-Off	O#			
			ਠ	Cluster 7				
			95% Completion Phase	pletion	Phase			
TYPE/LOCATION			DIMENSIONS (FEET)	EET)		TOTA! OIIANTITY	ANTITY	
	Length	×	Width	×	Height			NEWAYA
BUILDING 12								
Excavation for Footers - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	Section on	0	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	352	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	section on	465	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	0	×	Refer to Excavation Section on	to Excavation Section	section on	0	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti	Section on	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	240	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	Section on	317	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	Section on heet	0	Tons	
					Total:	781	Tons	
SLAB RESTORATION (SLAB + 20 feet)								
3-inch Bituminous Surface Course (Building 11)	220	×	19	×	K/N	1,491	SΥ	See Assumptions Sheet for calculations.
3-Inch Bituminous Surface Course (Building 12)	220	×	61	×	N/A	1,491	SY	See Assumptions Sheet for calculations.
		·			Total:	2,983	λS	
9-inch Dense Graded Subbase Aggregate ⁽⁵⁾ (Building 11)	220	×	61	×	0.75	919	Tons	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁶⁾ (Building 12)	220	×	5	×	0.75	919	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁸⁾	N/A	×	NA	×	N/A	2,301	Tons	Equals volume for footers and soil removed from site.
					Total:	4,140	Tons	

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OU-2 - Building Demolition

Quantity Take-Off

			Cluster 7 95% Completion Phase	Cluster 7	Phase			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	ET)		TOTAL DIJANTITY	- VIIIA	O NO
	Length	×	Width	×	Height			NEWANNS
Geotextile Fabric (Building 11)	220	×	5	×	Z V	13.420	SF	
Geotextile Fabric (Building 12)	220	×	61	×	Ϋ́Ν	13,420	SF	
					Total:	26,840	R.	
Notes: 1. Weight of light weight efeet te 490 lbs/cf.			General Notes: 1. Unit quantities	s shown on t	iis spread shee	General Notes; 1. Unit quantities shown on this spread sheet for below grade concrete,	s concrete,	
 Franting consists of 6-inch deep arch steel members 24-inches on center specing at 12 pounds per foot. Assumedd density of 2 tons/CY for concrete. Assumedd density of 120 pcf for soil. 			excavation, bituminous surface coarse, dense graded aggregate, and gedeartile have been rounded up to the nearest 10 on the Bid Schedule and Optrion of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derhations (provided under separate cover) for further assumptions and clarifications.	minous surfa been rounde Probable Cor X-Up Deriva kors and clari	ce coarse, dens d up to the nean setruction Cost fi tions (provided I finations.	e graded aggree est 10 on the Bio or contingency p under separate o	gate, and d Schedule nurposes. cover) for	
Assumed density of 140 pcf for dense graded aggregate.								

MALCOLM	និ	nell-Du	bilier Elec I-2 - Builc	Dubilier Electronics Superf OU-2 - Building Demolition	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition	Site		
			Quantif	Quantity Take-Off Cluster 8	* =			
		<i>G</i>	5% Com	95% Completion Phase	12Se			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	EET)		101	7	
	Length	×	Width	×	Height	IOIAL GOANIII	ANIIIT	KEMARKS
BUIL DING AREA								
	103	×	42	×	¥	4.326	SF	
Area (Building 15)	72	×	38	×	Ą X	2,592	SF	
Area (Building 16)	2	×	88	×	¥,	3,712	SF	
Area (Building 18)	17	×	6	×	N/A	153	SF	
					Total:	10,783	SF	
A STATE OF THE STA	- 1		200 T. S.					
BUILDING 13								Non-hazardous masonry quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and
Wall - Non-Hazardous	145	×	-	×	19.5	2	Tons	Off Site Disposal. Hazardous masonry quantities are included under the unit price item
								for Demolition, Handling / Stockpiling, Samuling and Off Sha Disposal of Hazardous
Wall - Metal Contamination	145	×	-	×	19.5	£	Tons	Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	268	Tons	
BUILDING 15								Non-hazardous masonry quantities are included in Bid Schedule under the lump sum then for Abous Code Structure Demolition and
								Off Site Disposal. Hazardous masonry
Wall - Non-Hazardous	165	×	-	×	24	188	Tons	quantities are included under the unit price item
:								for Demontron, Handling / Stockpling, Sampling, and Off Site Disposal of Hazardous
Wall - Metal Contamination	37	×	-	×	5 4	45	Tons	Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	230	Tons	



OU-2 - Building Demolition

Quantity Take-Off

			20	Cluster 8				
			95% Completion Phase	oletion F	hase			
TYPE / LOCATION	Length	DIME	DIMENSIONS (FEET)	ET)	Height	TOTAL QUANTITY	ANTITY	REMARKS
BUILDING 16								Non-hazardous masonry quantities are included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and
Wall - Non-Hazardous	310	×	-	×	38	558	Tons	Off Site Disposal. Hazardous masonry quantities are included under the unit price item for Demolition, Handling / Stockpiling,
Wall - Metal Contamination	36	×	-	×	38	92	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	623	Tons	
BUILDING 18 Wali - Non-Hazardous	25	×	-	×	13.5	33	Tons	Non-hazardous masonry quantities are included in Bid Schedule under the lump sum tem for Above Grade Structure Demolition and Off Site Disposal. Hazardous masonry quantities are included under the unit price item for Demolition, Handling / Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry. 20% deducted for windows see note 1.
					Total:	33	Tons	
Glace ⁽¹⁾ BUILDING 13								
Wall	290	×	N/A	×	19.5	က	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
					Total:	6	Tons	
Well	216	×	Z/A	×	54	2.6	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Ste Disposal. 80% deducted for masonry see note 1.
					Total:	2.6	Tons	

MALCOLM PIRNIE	Š	nell-Dub OU	Dubilier Electronics Superf OU-2 - Building Demolition Quantity Take-Off Cluster 8	ier Electronics Su :- Building Demol Quantity Take-Off Cluster 8	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 8	Site		
		Ö	95% Completion Phase	letion Ph	286			
TYPE / LOCATION		DIMEN	DIMENSIONS (FEET)	(E		TOTAL QUANTITY	ANTITY	REMARKS
	Length	×	Width	×	Height			
BUILDING 16	244	×	N/A	×	38	4.6	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demolition and Off Site Disposal. 80% deducted for masonry see note 1.
BUILDING 18					Total:	4.6	Tons	
Wall	52	×	N.	×	4	0.4	Tons	Glass quantities included in Bid Schedule under the lump sum item for Above Grade Structure Demoition and Off Site Disposal. 80% deducted for masonry see note 1.
					Total:	0.4	Tons	
WOOD		,						
Roof Decking (Building 15)	72	×	88	×	112	5.2	Tons	Wood quantities included in Bid Schedule
Roof Decking (Building 16)	\$	×	88	×	1/2	7.4	Tons	under the lump sum item for Asbestos Abatement.
			:		Total:	13	Tons	
ROOFING WATERIALS"								
Roofing Materials (Building 13)	103	×	42	×	¥.	32	Tons	
Roofing Materials (Building 15)	72	×	36	×	K/A	19	Tons	Roofing Material quantities included in Bid
Roofing Materials (Building 16)	2	×	28	×	N/A	58	Tons	Asbestos Abatement.
Roofing Materials (Building 18)	17	×	6	×	N/A	1	Tons	
					Total:	81	Tons	

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PIROLE		ò	OU-2 - Building Demolition	g Demoli	tion			
			Quantity Take-Off	Take-Off				
			Cluster 8	er 8				
		ö	95% Completion Phase	tion Pha	9			
TYPE		DIMEN	DIMENSIONS (FEET)	-	_		_	
	Length	×	Width	×	Height 10.	IOIAL GUANIII		REMARKS
STEEL FRAMING ALEMBERS BUILDING 15			602					
3 Columns - W12 x 65 at 27' High	27	×	N/A	×	က	9	Tons	Assumed column weight of 65 pouns per foot.
Beams - W18 x 35	180	×	K/A	×	N/A	3	Tons	Assumed beam weight of 35 pounds per foot.
					Total:	8 T	Tons	
BUILDING 16								
3 Columns - W12 x 65 at 27' High	27	×	¥/Z	×	ഇ	<u>٦</u>	Tons	Assumed column weight of 65 pouns per foot.
Beams - W8 x 21	150	×	A N	×	N/A	2 T	Tons	Assumed beam weight of 21 pounds per foot.
Beams - W12 x 35	168	×	N/A	×	N/A	3	Tons	Assumed beam weight of 35 pounds per foot.
Roof Beams - W14 x 22	175	×	N/A	×	N/A	2	Tons	Assumed beam weight of 22 pounds per foot.
Beams - W24 x 55	256	×	N/A	×	N/A	7	Torts	Assumed beam weight of 55 pounds per foot.
					Total:	16 T	Tons	

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		ō	OU-2 - Building Demolition	ding Den	olition			-
			Quanti	Quantity Take-Off	#5			
			₂	Cluster 8				
			95% Completion Phase	pletion F	hase			
TYPE/LOCATION		DIME	DIMENSIONS (FEET)	EET)		TOTAL OILANTIES	VIII	9 2 4 8 2 8
	Length	×	Width	×	Height	201		NEMANAS
CONCRETE ⁽⁴⁾ Above Grade Concrete								
Slab on Grade (Building 13) - Non-Hazardous	103	×	42	×	0.5	160	Tons	
Slab on Grade (Building 15, 16, & 18) - Non- Hazardous	134	×	72	×	0.42	298	Tons	Non-hazardous above grade concrete quantities are included in Bid Schedule under
Roof (Building 13) - Slab - Non-Hazardous	103	×	42	×	0.5	160	Tons	the lump sum item for Above Grade Structure Demolition and Off Site Disposal Hazandais
Roor (building 13) - 4 beams (2' Deep x 1' Wide) - Non-Hazardous	271	×	7	×	-	20	Tons	above grade concrete quantities are included
Roof (Building 18) - Slab - Non-Hazardous	17	×	6	×	0.5	•	Tons	under the unit price item for Demolition, Handling/Stockoiling, Sampling, and Off Site
Roof (Building 18) - 6 Beams (2' Deep x 1' Wide) - Non-Hazardous	204	×	2	×	-	15	Tons	Disposal of Hazardous Concrete and Masonry.
Delay Canada					Total:	629	Tons	
BUILDING 13								
Footings (Standard Tee) - Non-Hazardous	15	×	Refer to E Assu	Refer to Excavation Section on Assumptions Sheet	Section on heet	7	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	0	×	Refer to E Assu	Refer to Excavation Section on Assumptions Sheet	Section on heet	0	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Footings (Standard Tee) - TSCA Waste > 500 ppm	315	×	Refer to E Assi	to Excavation Secti Assumptions Sheet	Refer to Excavation Section on Assumptions Sheet	140	Tons	the lump sum item for Below Grade Structure Demolition and Off Site Disposal. Hazardous
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to E	Refer to Excavation Section on Assumptions Sheet	Section on heet	0	Tons	below grade concrete quantities are included under the unit price item for Demolition,
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to E Assu	Refer to Excavation Section on Assumptions Sheet	Section on theet	0	Tons	Handling/Stockplling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	17	×	Refer to E Assi	Refer to Excavation Section on Assumptions Sheet	Section on theet	80	Tons	
					Total:	151	Tons	

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OU-2 - Building Demolition

Quantity Take-Off Cluster 8

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TYPE / LOCATION			DIMENSIONS (FEET)	E.		TOTAL QUANTITY	ANTITY	REMARKS
	Length	×	Width	×	Height			
BUILDING 15, 16, & 18								
Footings (Standard Tee) - Non-Hazardous	ક્ક	×	Refer to Exc Assum	Refer to Excavation Section on Assumptions Sheet	ion on	54	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	28	×	Refer to Exc Assum	Refer to Excavation Section on Assumptions Sheet	ion on	12	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Footings (Standard Tee) - TSCA Waste > 500 ppm	92	×	Refer to Exc Assum	Refer to Excavation Section on Assumptions Sheet	no noi	72	Tons	the lump sum Item for Below Grade Structure Demolition and Off Site Disposal Hazardous
Footings (Standard Tee) - RCRA Waste - (Falling TCLP)	0	×	Refer to Exc Assum	Refer to Excavation Section on Assumptions Sheet	ion on	0	Tons	below grade concrete quantities are included under the unit orice item for Demolition
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	287	×	Refer to Exc Assum	Refer to Excavation Section on Assumptions Sheet	ion on	128	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	120	×	Refer to Exc Assum	Refer to Excavation Section on Assumptions Sheet	no noi	23	Tons	
				-	Total:	243	Tons	
BUILDING 15 - ADDITIONAL CONCRETE FOR BASE	BASEMENT							
Piers in Basement - Non-Hazardous	∞	×	80	×	∞	228	Tons	Six Piers Total
Basement SOG - Non-Hazardous	2	×	72	×	8	1,429	Tons	
Basement Walls - Non-Hazardous	જ	×	-	×	10	92	Tons	
Basement Walls (Standard Tee) - TSCA Waste < 500 ppm	0	×	-	×	9	0	Tons	Non-hazardous below grade concrete quantities are included in Bid Schedule under
Basement Walls (Standard Tee) - TSCA Waste > 500 ppm	78	×	-	×	5	25	Tons	the lump sum item for Below Grade Structure Demolition and Off Site Disposal. Hazardous
Basement Walls (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	-	×	10	0	Tons	below grade concrete quantities are included under the unit price item for Demolition,
Basement Walls (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	114	×	-	×	10	211	Tons	Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Basement Walls (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	35	×	1	×	10	65	Tons	
					Total:	2,049	Tons	

MALCOLM PIRNIE	Ŝ	G-llen	Comell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 8 95% Completion Phase	ss Superfunc emolition e-Off	Site		
TYPE / LOCATION	Length	WID ×	DIMENSIONS (FEET)	Height	TOTAL QUANTITY	ANTITY	REMARKS
EXCAVATION (111 SIDE SLOPES) Section (121 SI						**************************************	
Excavation for Footers - Non-Hazardous	15	×	Refer to Excavation Section on Assumptions Sheet	n Section on Sheet	20	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	n Section on Sheet	0	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	315	×	Refer to Excavation Section on Assumptions Sheet	n Section on Sheet	416	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	n Section on s Sheet	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	0	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	17	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	22	Tons	
BUILDING 15, 16, & 18				Total:	458	Tons	
Excavation for Footers - Non-Hazardous	55	×	Refer to Excavation Section on Assumptions Sheet	on Section on 8 Sheet	73	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	78	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	37	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	92	×	Refer to Excavation Section on Assumptions Sheet	on Section on B Sheet	74	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	287	×	Refer to Excavation Section on Assumptions Sheet	on Section on 8 Sheet	379	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	120	×	Refer to Excavation Section on Assumptions Sheet	on Section on s Sheet	158	Tons	
				Total:	721	Tons	



OU-2 - Building Demolition

Quantity Take-Off Cluster 8

		2	CIMENSIONS (FEFT)		_			
TYPE / LOCATION	Length	×	Width	·	Helaht	TOTAL QUANTITY	ANTITY	REMARKS
BUILDING 15 - ADDITONAL EXCAVATION FOR BAS	BASEMENT							
Excavation for Basement - Non-Hazardous	35	×	7	×	0	45	Tons	
Excavation for Basement - TSCA Waste < 500 ppm	0	×	2	×	9	0	Tons	
Excavation for Basement - TSCA Waste > 500 ppm	88	×	7	×	6	*	Tons	Excavation quantities included in Bid Schedule
Excavation for Basement - RCRA Waste - (Failing TCLP)	0	×	7	×	10	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Basement - Both TSCA/RCRA (TSCA < 500 ppm)	411	×	7	×	10	137	Tons	
Excavation for Basement - Both TSCA/RCRA (TSCA > 500 ppm)	35	×	8	×	10	42	Tons	
					Total:	254	Tons	
SLAB RESTORATION (BLAB + 20 feet)								
3-inch Bituminous Surface Course (Building 13)	123	×	82	×	¥	84	S	See Assumptions Sheet for calculations.
3-inch Bituminous Surface Course (Building 15, 16, & 18)	2 7	×	83	×	N/A	1,574	SΥ	See Assumptions Sheet for calculations.
			: :		Total:	2,422	λS	
9-inch Dense Graded Subbase Aggregate ⁽⁶⁾ (Building 13)	123	×	62	×	0.75	524	Tons	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁹⁾ (Building 15, 16, & 18)	154	×	83	×	0.75	1,086	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Basement ⁽⁶⁾ (Building 15)	134	×	22	×	12	8,104	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁶⁾	N/A	×	N/A	×	N/A	1,969	Tons	Equals volume for footers and soil removed from site.
					Total:	11,683	Tons	

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OU-2 - Building Demolition

Quantity Take-Off Cluster 8

TYPE / LOCATION		DIME	DIMENSIONS (FEET)	EI)		TOTAL CHANTITY	VIIIA	DEMADKS
	Length	×	Width	×	Height			NEWARKS
Geotextile Fabric (Building 13)	123	×	62	×	N N	7,626	SF.	
Georgania Fabric (Bunuling 15, 16, & 16)	<u>\$</u>	×	76	×	Total:	21,794	r R	
Notes: 1. 20% deducted from total wall area for windows. Assumedd 1.30 tonaicy for 8 inch CMU w/ 1/3 voids and 0.3 tonaicy of brick for a total of 1.6 tonaicy for masonry and 5 per for glass. 2. Assumeds density of 4 per for wood roofing. 3. Assumeds density of 3 per for vood roofing. 4. Assumeds density of 2 tonaicy for concrata. 5. Assumeds density of 2 tonaicy for concrata. 6. Assumeds density of 120 per for soil. 7. Assumeds density of 120 per for soil. 8. Assumeds density of 120 per for soil.			General Notes: 1. Unit quentities shown on this spread excavation, bituminous surface coarse gedeatile have been rounded up to the and Optimizer of Probable Construction See Pricing Back-Up Derivations (purther assumptions and clarifications).	s shown on t minous surfa been rounds Probable Co X-Up Dente ions and clar	his spread she not coarse, der dup to the ner shruction Cost tilons (provider, fifcallons.	General Notes: 1. Unit quentities shown on this spread sheet for below grade concrete, excavetion, bituminous surface coarse, dense graded aggregate, and geolexitie have been rounded up to the nearest 10 on the Bid Schedule and Opinion of Probable Construction Cost for contingency purposes. See Pricing Back-up Derhations (provided under separate cover) for further assumptions and clarifications.	concrete, and ISchedule urposes.	

MALCOLM PIRNIE	ŏ	omell-Dubi	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition	ics Superf	und Site		
			Quantity Take-Off Cluster 9	ke-Off 9			
		95	95% Completion Phase	n Phase			
TYPE / LOCATION	Length	DIMENSIONS (FEET)	IS (FEET) th	Height	TOTAL QUANTITY	ANTITY	REMARKS
BUILDING AREA	. 29	x 27		₩	1,809 SI	Ω	
				Total:	1,809	SF	
		x N/A			9	Tons	Wood quantities included in Bid Schedule
Roof Decking - Non-Hazardous	29	x 27	*	Y/N	3.6	Tons	under the lump sum item for Asbestos Abatement.
				Total:	9.3	Tons	
ROOFING MATERIALS ⁽⁷⁾							
Roofing Materials	. 29	x 27	×	N/A	41	Tons	Roofing Material quantities included in Bid Schedule under the lump sum item for Asbestos Abatement.
				Total:	14	Tons	
STEEL FRAMING MEMBERS		AN X	in in the second	N/A 0 Tone		Tons	
				T	5	SUO	

MALCOLM PIRNIE		Cornell	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition	lectronic	s Superfu	ind Site		
			Qua	Quantity Take-Off	₽ Ho-I			
				Cluster 9				
			95% Co	95% Completion Phase	Phase			
TYPE / LOCATION		DIME	DIMENSIONS (FEET)	ET)	_	1014101	7	
	Length	×	Width	×	Height	IOIAL GOANIII T	ANIII	KEMAKKS
CONCRETE(9) NO TO THE STATE OF								
Above Grade Concrete								Non-hazardous above grade concrete quantities are included in Bid Schedule under
								the lump sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous above grade converte automities and included
Slab on Grade - Non-Hazardous	29	×	27	×	0.5	29	Tons	above grade concrete quantities are included under the unit price item for Demoittion, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
				:	Total:	29	Tons	
Below Grade Concrete								
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ction on et	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ction on et	0	Tons	Non-hazardous below grade concrete quantities are included in Bid Schadule under the lumn
Footings (Standard Tee) - TSCA Waste > 500 ppm	244	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sectives	ction on et	108	Tons	sum item for Below Grade Structure Demolition and Off Site Disposal. Hazardous below grade
Footings (Standard Tee) - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sectle Assumptions Sheet	ction on et	0	Tons	concrete quantities are included under the unit price item for Demolition, Handling/Stockpiling.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	ction on et	0	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	ction on et	0	Tons	
					Total:	108	Tons	

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OU-2 - Building Demolition

Quantity Take-Off

Cluster 9 95% Completion Phase

TYPE / LOCATION	Length	DIME	DIMENSIONS (FEET) Width x	Height	TOTAL QUANTITY	IANTITY	REMARKS
EXCAVATION (1:1 SIDE SLOPES) ⁶⁰		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m	
Excavation for Footers - Non-Hazardous	, 0	×	Refer to Excavation Section on Assumptions Sheet		0 • • • • • • • • • • • • • • • • • • •	Tons	
Excavation for Footers - TSCA Waste < 500 ppm	0	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	0	Tons	
Excavation for Footers - TSCA Waste > 500 ppm	244	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	322	Tons	Excavation quantities included in Bid Schedule
Excavation for Footers - RCRA Waste - (Failing TCLP)	0	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	0	Tons	under unit price items for hazardous and non- hazardous soil disposal and reuse.
Excavation for Footers - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	Section on Sheet	0	Tons	
Excavation for Footers - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	s Section on Sheet	0	Tons	
				Total:	322	Tons	

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OU-2 - Building Demolition

Quantity Take-Off Cluster 9

TYPE / LOCATION		DIME	DIMENSIONS (FEET)	ET)		7074	A NITTING	
	Length	×	Width	×	Height	IOIAL GUANIIIT	ANIII	REMARKS
SLAB RESTORATION (SLAB + 20 feet) 3-inch Bituminous Surface Course	87	×	47	×	N/A	454	λS	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁵⁾	87	×	47	×	0.75	265	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁵⁾	N/A	×	N/A	×	N/A	478	Tons	Equals volume for footers and soil removed from site.
					Total:	743	Tons	
Geotextile Fabric	87	×	47	×	N/A	4,089	R	
Notes: 1. Assumedd density of 4 psf for wood roofing. 2. Assumedd density of 3 psf for 1 layer of asphalt shingles, assuming 5 layers, the total density is 15 psf for roofing materials. 3. Assumedd density of 2 tons/CY for concrete. 4. Assumedd density of 120 pcf for soil. 5. Assumedd density of 140 pcf for dense graded aggregate.			General Notes: 1. Unit quantities shown on this spread sheet for below grade concrete, excavation, bituminous surface coarse, dense graded aggregate, and geotextile have been rounded up to the nearest 10 on the Bid Schedule and Opinion of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.	s shown on the minimus surface to the peer rounder Probable Contact to Derivations and cleritions and cleritions.	us spread shee to coarse, dens I up to the nasr struction Cost f ions (provided fications.	for below grad e graded aggre set 10 on the Bi or contingency I under separate	e concrete, gate, and d Schedule purposes. cover) for	



OU-2 - Building Demolition

Quantity Take-Off Cluster 10

TYPE / LOCATION			DIMENSIONS (FEET)	EET)		VIITANI O I ATITY	VTITA	DELLADVO
	DÍA	×	Height	×	Thickness	101 A		KEMAKAS
EXCAVATION (1:1 SIDE SLOPESI")								
Excavation Non-Hazardous	0	×	0	×	A/A	0	Tons	
Excavation - TSCA Waste < 500 ppm	93	×	9	×	Ą/X	191	Tons	
Excavation - TSCA Waste > 500 ppm		×	0	×	A/N	0	Tons	Excavation quantities included in Bid Schedule under unit price items for hazardous and non-hazardous soil
Excavation - RCRA Waste - (Failing TCLP)	0	×	0	×	A/A	0	Tons	Prince in the control of the control
Excavation - Both TSCA/RCRA (TSCA < 500 ppm)	30	×	ဖ	×	N/A	49	Tons	(1000)
Excavation - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	0	×	N/A	0	Tons	
					Total:	254	Tons	

MICOIM		ŭ	ornell-Dub	ilier Ek	Cornell-Dubilier Electronics Superfund Site	perfund S	ite	
PIRALE			OO	.2 - Bui	OU-2 - Building Demolition	ition		
				Quant	Quantity Take-Off	-		
				ប	Cluster 10			
			6	5% Con	95% Completion Phase	180		
TYPE/LOCATION		2	DIMENSIONS (FEET)	EET)		TOTAL DIJANTITY	YTITA	REMARKS
	DIA	×	Height	×	Thickness			
CONCRETE [®] - BELOW GRADE		4						
Piers - Non-Hazardous	0	×	0	×	0	0	Tons	
Piers - TSCA Waste < 500 ppm	9	×	9	×	7	19	Tons	Non-hazardous below grade concrete quantities are
Piers - TSCA Waste > 500 ppm	0	×	0	×	0	0	Tons	included in Bid Schedule under the lump sum Item for Below Grade Structure Demolition and Off Site Disposal.
Piers - RCRA Waste - (Failing TCLP)	0	×	0	×	0	0	Tons	riazardous below grade condrete quantities are included under the unit price fleer for Demolition.
Piers - Both TSCA/RCRA (TSCA < 500 ppm)	9	×	9	×	က	∞	Tons	nanding Stockhing, Sampling, and On Site Disposal of Hazardous Concrete and Masonry.
Piers - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	0	×	0	0	Tons	
					Total:	27	Tons	



OU-2 - Bullding Demolition Quantity Take-Off

Cluster 10

95% Completion Phase

TYPE / LOCATION		DIME	MENSIONS (FEET)	ET)		VICTAL OILANTIC	AHTHA	
	DIA	×	Height	×	Thickness	101		KEMAKAS
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						1	
Water Tower	90	×	22	×	0.03125	18	Tons	Steel quantities included in Bid Schedule under the lump
Top and Bottom Sections	30	×	Y/X	×	0.03125	ß	Tons	sum Item for Above Grade Structure Demolition and Off Site Disposal
					Total:	23	Tons	
SI AR RESTORATION (SI AB ± 20 2	3 2 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4							できた はってい かいくきょう コンス・ランス こうかい こうきょうじゅ 経験者 こうごうしゅ
3-inch Bituminous Surface Course	် အ	* ×	ΑΝ	े * * *		218	ું }	300
								Secretaring Green of Conditions.
9-inch Dense Graded Subbase Aggregate ⁽⁴⁾	20	×	0.75	×	A/X	163	Tons	Cas Accumulation Chaof for coloulations
Additional Dense Graded Aggregate For	¥ Ž	×	ď Ž	×	Ą	322	T Such Such Such Such Such Such Such Such	God Assumptions Gridel for Calculations.
Irench & Soil Removed From Site						750	2	Equals volume for footers and soil removed from site.
					Total:	486	Tons	
Geotextile Fabric	20	×	N/A	×	N/A	1,963	SF	
Notes:			General Notes:					
1. Assumedd density of 120 pcf for soil.			 Unit quantitite excavation bit 	ss shown on	 Unit quantities shown on this spread sheet for below grade concrete, excession hiteminess surface coarse dense maded concepts and 	for below grad A graded sours	e concrete,	
2. Assumedd density of 2 tons/CY for concrete.			geotextile have	been round	geotextile have been rounded up to the nearest 10 on the Bid Schedule	set 10 on the B	d Schedule	
3. Weight of light weight steel is 490 lba/of			See Pricing Ba	Ok-Up Deriv	en opinion of notative construction cost to contribution y purposes. See Pricing Back-Up Derivations (provided under separate cover) for	a conumpency inder separate	cover) for	
 Assumedd density of 140 pcf for dense graded 			further assumptions and clarifications.	tions and cla	uffications.	•		
aggregate.								

Cornell-Dubilier Electronics Superfund Site OU-2 Building Demolition Middlesex County, New Jersey

MALCOLM PIRNIE		Cornell-	Dubiller OU-2 - B Qua	Dubilier Electronics Superfi OU-2 - Building Demolition Quantity Take-Off Cluster 11 95% Completion Phase	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 11 95% Completion Phase	und Site		
TYPE / LOCATION	Length	× DIME	DIMENSIONS (FEET)	'EET) ×	Height	TOTAL QUANTITY	JANTITY	REMARKS
BUILDING AREA.	102	**************************************	5. 5. 6.		N/A	5,202	SF	
Wacow.						- So Zoz'c	5	
Walls	306	×	A/N	×	41	6	Tons	<u>: </u>
Roofing	306	×	51	×	N/A	31	Tons	under de lump sum item for Asbestos Abatement.
			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		Total:	40	Tons	The Property of the Control of the C
Roofing Materials	10 2	102 × 51	6	*	N N	86	39 Tons	Roofing Material quantities included in Bid Schedule under the lump sum item for Asbestos Abatement.
					Total:	39	Tons	

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OU-2 - Building Demolition

			Quantity Take-Off Cluster 11 95% Completion Phase	Quantity Take-Off Cluster 11 % Completion Pha	-Off Phase			
TYPE / LOCATION	Length	×	DIMENSIONS (FEET)	e ×	Height	TOTAL QUANTITY	ANTITY	REMARKS
STEEL FRAMING MEMBERS	W		, AIM		WN	[0 Tons	
CONCRETE								Non-hazardous above grade concrete cuantities are included in Bid Schedule under
Above Grade Concrete	102	×	5	×	0.38	145	Tons	the lump sum item for Above Grade Structure Demolition and Off Site Disposal. Hazardous above grade concrete quantities are included under the unit price item for Demolition, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonny.
Below Grade Concrete					Total:	145	Tons	
Footings (Standard Tee) - Non-Hazardous	0	×	Refer to Excavation Section on	to Excavation Section	ection on	0	Tons	
Footings (Standard Tee) - TSCA Waste < 500 port	22	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sections Sheet	oction on	32	Torns	Non-hazardous below grade concrete quantities are included in Rid Schedule under the lumn
Footings (Standard Tee) - TSCA Waste > 500 pom	116	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Assumptions Sheet	etion on	25	Tons	sum item for Below Grade Structure Demolition and Off Site Disnosal. Hazardous below grade
Footings (Standard Tee) - RCRA Waste - (Falling TCLP)	٥	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Sections Sections Sheet	sction on	0	Toms	concrete quantities are included under the unit price item for Demolition, Handling/Stockoiling.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA < 500 ppm)	19	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Section Section Section Assumptions Sheet	action on	98	Tons	Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footings (Standard Tee) - Both TSCA/RCRA (TSCA > 500 ppm)	0	×	Refer to Excavation Section on Assumptions Sheet	to Excavation Secti Assumptions Sheet	action on set	0	Tons	
					Total:	120	Tons	

	REMARKS	Excavation quantities included in Bid Schedule under unit price items for hazardous and nonhazardous soil disposal and reuse.	
	VANTITY	Tons Tons Tons Tons Tons Tons Tons	
fund Site	TOTAL QUANTITY		
Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 11 95% Completion Phase	4S (FEET) th × Height	Assumptions Sheet To Excavation Section on Assumptions Sheet To Excavation Sheet To Excavation Sheet	(0181)
Comell-Dubil OU-2	DIMENSIONS (FEET)	* * * * * * *	
	Length	0 0 1148 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
MALCOLM PIRNIE	TYPE / LOCATION	Refer to Excavation Section on Assumptions Sheet Refer to Excavation Sheet Refer to Excavation Sheet Assumptions Sheet Assumptions Sheet Assumptions Sheet Assumptions Sheet Assumptions Sheet Assumptions Sheet Refer to Excavation Section on Assumptions Sheet Assumptions Sheet Assumptions Sheet Assumptions Sheet Assumptions Sheet	



OU-2 - Building Demolition **Quantity Take-Off**

Cluster 11

			95% Co	95% Completion Phase	Phase			
TYPE / LOCATION	Length	DIME	DIMENSIONS (FEET)	E ×	Height	TOTAL QUANTITY	ANTIITY	REMARKS
SLAB RESTORATION (SLAB + 20 (1961) 3-inch Bituminous Surface Course	122	× 7	7		A N	893)	See Assumptions Sheet for calculations.
9-inch Dense Graded Subbase Aggregate ⁽⁶⁾	122	×	7	×	0.75	616	Tons	See Assumptions Sheet for calculations.
Additional Dense Graded Aggregate For Trench & Soil Removed From Site ⁽⁵⁾	NA	×	¥/N	×	Ą Z	527	Tons	Equals volume for footers and soil removed from site.
55 55					Total:	1,143	Tons	
Geotextile Fabric	122	×	71	×	N/A	8,662	SF	
Notes: 1. Assumed density of 4 psf for wood roofing. 2. Assumed density of 3 psf for 1 layer of ssphalt shingles, assuming 5 layers, the total density is 15 psf for roofing materials. 3. Assumed density of 2 tona/CY for concrete. 4. Assumed density of 120 pcf for soil. 5. Assumed density of 140 pcf for dense graded aggregate.			Geogral Noise: 1. Unit quantities shown on this spread sheet for below grade concrete, excavation, bituminous surface coarse, dense graded eggregate, and geotextile have been rounded up to the nearest 10 on the Bid Schedule and Opinion of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further assumptions and clarifications.	s shown on the minous surface been rounded Probable Const. X-Up Derivations and clarificens and clarificens.	is spread shee e coarse, dene up to the near struction Cost if ons (provided cartions.	i for below grad e graded aggra est 10 on the B or contingency under separatia	e concrete, gate, and id Schedule purposes. cover) for	

MALCOLM PIRNIE		Con	Cornell-Dubilier Electronics Superfund Site OU-2 - Building Demolition Quantity Take-Off Cluster 12 95% Completion Phase	r Electronics Building De Lantity Take Cluster 12	Dubilier Electronics Superfi OU-2 - Building Demolition Quantity Take-Off Cluster 12 95% Completion Phase	on		
TYPE / LOCATION	DIA	MIQ ×	DIMENSIONS (FEET)	ET) .x	Thickness	TOTAL QUANTITY	ANTITY	REMARKS
EXCAVATION (1:1 SIDE SLOPES) ⁽¹⁾		, F						
Excavation Non-Hazardous	0	×	0	×	Ϋ́	0	Tons	
Excavation - TSCA Waste < 500 ppm	0	×	0	×	A/A	0	Tons	
Excavation - TSCA Waste > 500 ppm	0	×	0	×	N/A	0	Tons	Excavation quantities included in Bid Schedule under unit price items for hazardous and non-
Excavation - RCRA Waste - (Failing TCLP)	0	×	0	×	N/A	0	Tons	hazardous soil disposal and reuse. (See Scenario No. 2 on Assumptions Sheet).
Excavation - Both TSCA/RCRA (TSCA < 500 npm)	0	×	0	×	N/A	0	Tons	
Excavation - Both TSCA/RCRA (TSCA > 500 ppm)	27	×	9	×	N/A	206	Tons	
					Total:	506	Tons	



OU-2 - Building Demolition

Quantity Take-Off

Cluster 12

			82%	Comple	95% Completion Phase	•		
TYPE / LOCATION	DIA	DİM ×	DIMENSIONS (FEET) Height	EET)	Thickness	TOTAL QUANTITY	JANTITY	REMARKS
CONCRETE ⁽²⁾ - BELOW GRADE		end end jane						
Footing Ring - Non-Hazardous	0	. x	0	×	7 :		Tons	受視論 (1) A control (no. 1) de control (no. 1) a
Footing Ring - TSCA Waste < 500 ppm	0	×	0	×	1.5	0	Tons	Non-hazardous below grade concrete quantities are
Footing Ring - TSCA Waste > 500 ppm	0	×	0	×	7:	0	Tons	included in Bid Schedule under the lump sum item for Below Grade Structure Demolition and Off Site
Footing Ring - RCRA Waste - (Failing TCLP)	0	×	0	×	1.5	0	Tons	Disposal. Hazardous below grade concrete quantities are included under the unit price item for
Footing Ring - Both TSCA/RCRA (TSCA < 500 ppm)	0	×	0	×	1.5	0	Tons	Demolition, Handling/Stockpiling, Sampling, and Off Site Disposal of Hazardous Concrete and Masonry.
Footing Ring - Both TSCA/RCRA (TSCA > 500 ppm)	27	×	4	×	1.5	38	Tons	
					Total:	38	Tons	
STEEL								
Water Tower	27	×	93	×	0.03125	19	Tons	Steel quantities included in Bid Schedule under the
Top and Bottom Sections	27	×	N/A	×	0.03125	4	Tons	lump sum item for Above Grade Structure Demolition and Off Site Disposal.
					Total:	24	Tons	

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PIRNIE			00-5	- Buildir	OU-2 - Building Demolition	u o		
				Clus	Cluster 12			
			95	% Compl	95% Completion Phase	•		
TYPE / LOCATION	Ą	Wid ,	DIMENSIONS (FEET)	(FEET)	Third	TOTAL QUANTITY	JANTITY	REMARKS
SLAB RESTORATION (SLAB + 20 feet) 3-inch Bituminous Surface Course	. 4	*	¥ X	V ."	W AN	193	. } }	See Assumptions Sheet for releviations
9-inch Dense Graded Subbase Aggregate ⁽⁴⁾	47	×	0.75	×	A/N	143	Tons	
Additional Dense Graded Aggregate For Trench & Soil Removed From Site (5)	N/A	×	N/A	×	N/A	276	Tons	See Assumptions Sileet for Calculations. Equals volume for footers and soil removed from site.
Gentaxtile Estric	47	,	Š	,	Total:	419	Tons	
Nofes:		4	General Notes:	×	Ç.	667,1	<u></u>	
 Assumed density of 120 pcf for soil. Assumed density of 2 tons/CY for concrete. 			1. Unit quan excavation, geotextile h	tities shown o bituminous su ave been rour	1. Unit quantities shown on this spread sheet for below grade concrete, excavation, bituminous surface coerse, dense graded aggregate, and geotextile have been rounded up to the nearest 10 on the Bid Schedule	of for below grades grades aggreement to on the B	le concrete, gate, and id Schedule	
3. Weight of light weight steel is 490 lbs/cf			and Opinion See Pricing	and Opinion of Probable Construction See Pricing Back-Up Derivations (pro further generalized and desifications	and Opinton of Probable Construction Cost for contingency purposes. See Pricing Back-Up Derivations (provided under separate cover) for further seatmentions and designations.	for contingency under separate	purposes. cover) for	
 Assumedd density of 140 pcf for dense graded aggregate. 					Admicatorie.			



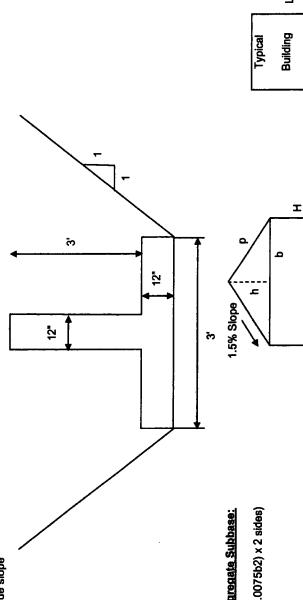
OU-2 - Building Demolition Quantity Take-Off

Assumptions

95% Completion Phase

Excavation Section:

Standard tee footing with 1:1 side slope



Volume of Dense Graded Aggregate Subbase:

 $V = (L \times W \times H) + (W \times (1/2 \times 0.0075b2) \times 2 \text{ sides})$

Area of Triangle = $1/2 \times b \times h$ h = 0.015b

Therefore, Area = $1/2 \times 0.0075b^2$

Cluster

Plan ₹

Section

Surface Area of Bituminuous Surface Course:

 $SA = (W \times (b^2 + (0.015b^2))^{1/2}) \times 2$ sides $p^2 = b^2 + h^2$ Therefore, $p = (b^2 + (0.015b^2))^{1/2}$ Cornell-Dubilier Electronics Superfund Site OU-2 Building Demolition Middlesex County, New Jersey

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